Notes on

The British Pharmacopœia
1914.

FORMULÆ

AND

PROCESSES

Alterations, Additions and Omissions.

ALCOHOL TABLE.
METRIC EQUIVALENTS.
ARSENIC LIMITS.
and much other
USEFUL INFORMATION.

With the Compliments of

C. R. HARKER, STAGG & MORGAN, Ltd.

NOTES

— on —

The British Pharmacopœia, 1914.

LONDON:
C. R. HARKER, STAGG & MORGAN, LTD.,
Devon Wharf, Emmott Street,
Mile End, E.

INTRODUCTION.

IN the following pages will be found full details concerning the galenical preparations of the new British Pharmacopœia, which, by the courtesy of the Editor, we have been permitted to reprint from the *Pharmaceutical Journal.* Our customers will thus be enabled to appreciate fully the extent of the alterations in, and additions to, the existing preparations, and will have at hand in a concise form the information necessary for the replacement or utilization of their present stock. As the new Pharmacopœia becomes official on January 1st, 1915, we have compiled a table of the equivalents in ordinary weights and measures of every metrical quantity mentioned in the B.P. in order to overcome any temporary difficulty in respect of the absence of metric weights and measures. This will be found on pages 48-51, and on pages 52-53 is a list of the official limits of Lead and Arsenic in the B.P. Chemicals.

We have also included our Alcohol Table, together with various Tables of Useful Information for Pharmacists reprinted from Harker's Annual Calendar, which will not be issued this year. An Almanac for 1915 appears on the next page.

December, 1914.

Devon Wharf,
Emmott Street,
Mile End, London, E.

CALENDAR, 1915.

JANUARY.

S	M	T	W	T	F	S
...	...	...	...	...	1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31	...	...	...	...	...	...

FEBRUARY.

S	M	T	W	T	F	S
...	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	...	...	...	...	...	...
...	...	...	...	...	...	...

MARCH.

S	M	T	W	T	F	S
...	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31	...	...	...
...	...	...	...	...	...	...

APRIL.

S	M	T	W	T	F	S
...	...	...	...	1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	...
...	...	...	...	...	...	...

MAY.

S	M	T	W	T	F	S
...	...	...	...	...	...	1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31	...	...	...	...	...

JUNE.

S	M	T	W	T	F	S
...	...	1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	...	...	...
...	...	...	...	...	...	...

JULY.

S	M	T	W	T	F	S
...	...	...	...	1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31
...	...	...	...	...	...	...

AUGUST.

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31	...	...	...	...
...	...	...	...	...	...	...

SEPTEMBER.

S	M	T	W	T	F	S
...	...	...	1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	...	...
...	...	...	...	...	...	...

OCTOBER.

S	M	T	W	T	F	S
...	...	...	...	...	1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31	...	...	...	...	...	...

NOVEMBER.

S	M	T	W	T	F	S
...	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	...	...	...	...
...	...	...	...	...	...	...

DECEMBER.

S	M	T	W	T	F	S
...	...	...	1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	...
...	...	...	...	...	...	...

HOLIDAYS, 1915.

Good Friday ...	Apl. 2	Whit Monday...	May 24	Christmas Day ...	Dec. 25
Easter Monday	Apl. 5	Bank Holiday ...	Aug. 2	Bank Holiday ...	Dec. 27

NOTES ON THE BRITISH PHARMACOPŒIA, 1914.

FORMULÆ AND PROCESSES.

THE following notes deal with the medicinal preparations for which formulæ and processes (including standardisation and assay processes) are given in the British Pharmacopœia, 1914, and include such particulars regarding new and altered preparations, and standardised drugs, as will enable pharmacists to make the necessary additions to, and alterations in, their existing stock. All that is necessary is to read these notes in conjunction with the 1898 Pharmacopœia, bearing in mind that, unless the contrary be expressly stated, no material change in a formula, process, or dose has been made, and that all comparisons of quantities of ingredients refer only to those stated in terms of metric weights and measures. Where a preparation of the 1898 Pharmacopœia is not included in the British Pharmacopœia, 1914, or is included without change, the fact is indicated by the use of the words "Formula omitted" or "Formula unaltered," as the case may be. The word "modified" is employed to indicate more or less unimportant changes, including slight alterations in the proportions of ingredients, consequent upon the exclusive use of metric weights and measures, and the avoidance of inconvenient fractional quantities.

No preparations of the Indian and Colonial Addendum are officially retained, except those which are specifically indicated as additions to the Pharmacopœia.

In order to economise space the following abbreviations are used :—B.P.C. = British Pharmaceutical Codex, 1911; I.C.A. = Indian and Colonial Addendum to the British Pharmacopœia, 1898; Gm. = gramme or grammes; mils = millilitres; s.g. = specific gravity; p.c. = per cent.; w/v = weight in volume; q.s. = a sufficient quantity.

Acetum Cantharidini.—Cantharidin, 1 Gm.; glacial acetic acid, 200 mils; acetic acid, to 2,000 mils. Dissolve cantharidin in the glacial acetic acid on a water bath, cool, and add the acetic acid.
[*Same as B.P.C.*

Acetum Cantharidis.—Formula omitted.

Acetum Ipecacuanhæ.—Formula omitted.

Acetum Scillæ.—Squill, bruised, 1,000 Gm. ; acetic acid, 1,000 mils ; distilled water, 3,200 mils. Macerate for seven days, press and filter. S.g. 1·070. Dose : 3 to 10 decimils (5 to 15 minims). [*100 p.c. stronger.*

Acetum Urgineæ.—Urginea, bruised, 1,000 Gm. ; acetic acid, 1,000 mils ; distilled water, 3,200 mils. Macerate for seven days, press and filter. S.g. 1·070. Dose : 3 to 10 decimils (5 to 15 minims). [*100 p.c. stronger than I.C.A.*

Acidum Aceticum Dilutum.—Acetic acid (s.g. 1·044), 152 6 Gm. ; distilled water, to 1,000 mils. Contains 5 p.c. real acid. S.g. 1·007. Dose : 2 to 4 mils (½ to 1 fl. dr.). [*Slightly stronger.*

Acidum Carbolicum Liquefactum.—Phenol, 100 Gm. ; distilled water, to 115 Gm. S.g. 1·067 to 1·069. [*Slightly weaker.*

Acidum Hydriodicum Dilutum.—Contains 10 p.c. by weight of real acid and 1 p.c. of hypophosphorous acid. Dose : 3 to 6 decimils (5 to 10 minims).

Acidum Hydrobromicum Dilutum.—Contains 10 p.c. by weight of real acid. Dose : 1 to 4 mils (15 to 60 minims).

Acidum Hydrochloricum Dilutum.—Hydrochloric acid (s.g. 1·160), 330 Gm. ; distilled water, to 1,000 mils. Contains 10 p.c. real acid. S.g. 1·048. [*Slightly weaker.*

Acidum Nitricum Dilutum.—Nitric acid (s.g. 1·42), 151 Gm. ; distilled water, to 1,000 mils. Contains 10 per cent. real acid. S.g. 1·057. [*12·66 p.c. weaker.*

Acidum Nitro-hydrochloricum Dilutum.—Formula unaltered.

Acidum Phosphoricum Dilutum.—Concentrated phosphoric acid (s.g. 1·5), 159·5 Gm. ; distilled water, to 1,000 mils. Contains 10 per cent. real acid. S.g. 1·057. [*27·54 p.c. weaker.*

Acidum Sulphuricum Aromaticum.—Tincture of ginger, 250 mils ; spirit of cinnamon, 15 mils ; sulphuric acid (s.g., 1·841), 70 mils ; alcohol (90 per cent.), to 1,000 mils. S.g., 0·917 to 0·923. [*Slightly weaker.*

Acidum Sulphuricum Dilutum.—Sulphuric acid (s.g. 1·841), 112·5 Gm. ; distilled water, to 940 mils, or *q.s.* Contains 10 per cent. real acid. S.g., 1·069. [*26·74 p.c. weaker.*

Aconiti Radix.—Yields not less than 0·4 per cent. of ether-soluble alkaloids when assayed as follows :—Macerate aconite root, in No. 40 powder, 10 Gm., with alcohol (70 per cent.), 75 mils, in a small stoppered percolator for four hours, shaking occasionally ; then allow percolation to proceed and continue with more alcohol until the percolate measures 150 mils, or the root is exhausted. Evaporate the percolate to dryness in a shallow porcelain basin at a temperature not exceeding 60°, dissolve the residue in 5 mils of N/10 sulphuric acid diluted with 20 mils of water, and filter into a separating funnel, washing dish and filter with about 30 mils of water. Add to the mixed liquids 25 mils of ether and 2 mils of solution of ammonia, shake for one minute, separate the aqueous layer, and filter the ethereal solution into a beaker. Shake the aqueous liquid with 20 mils of ether for one minute and separate; repeat the operation with two other portions (each of 20 mils) of ether, evaporate the mixed ethereal solutions to dryness, dry the residue at 60°, dissolve it in 5 mils of N/20 sulphuric acid diluted with 20 mils of water, and titrate back with N/20 sodium hydroxide solution, with tincture of cochineal as indicator. Finally, deduct from 5 the number of mils of the alkaline solution required, and multiply the difference by 0·3217 to ascertain the percentage of ether-soluble alkaloids in the powdered root.

Adeps Benzoatus.—Prepared lard, 1,000 Gm.; benzoin, in coarse powder, 30 Gm. Maintain at temperature of 60° for 1 hour.

Adeps Lanæ Hydrosus.—Formula unaltered.

Antimonium Sulphuratum.—Formula unaltered.

Aqua Anethi.—Formula unaltered.

Aqua Anisi.—Formula unaltered.

Aqua Aurantii Flores.—Formula uualtered.

Aqua Camphoræ.—Camphor, 1 Gm.; alcohol (90 per cent.), 2 mils; distilled water, to 1,000 mils. [*Modified.*

Aqua Carui.—Formula unaltered.

Aqua Chloroformi.—Formula unaltered.

Aqua Cinnamomi.—Formula unaltered.

Aqua Fœniculi.—Formula unaltered.

Aqua Laurocerasi.—Strength and dose unaltered.

Aqua Menthæ Piperitæ.—Formula uualtered.

Aqua Menthæ Viridis.—Formula unaltered.

Aqua Pimentæ.—Formula omitted.

Aqua Rosæ.—Formula unaltered.

Aqua Sambuci.—Formula omitted.

Argenti Nitras Induratus.—Formula uualtered.

Argenti Nitras Mitigatus.—Formula unaltered.

Balsamum Peruvianum.—Should yield not less than 57 per cent. of cinnamein when assayed as follows:—Dissolve 1 Gm. in 30 mils of ether, shake out with 20 and 10 mils respectively of N/2 sodium hydroxide solution, mix and shake the separated alkaline solutions with 10 mils of ether, draw off and reject the alkaline solution, and mix the ethereal solutions. Wash the mixture with two successive 5 mils of water, evaporate off the ether in a tared wide-mouthed flask, add

1 mil of absolute alcohol, dry at 100° for half an hour, and weigh. The weight should be not less than 0·57 Gm., and the saponification value of the residue should be not less than 235.

Belladonnæ Folia.—Yields not less than 0·3 per cent. of alkaloids when assayed as follows:—Shake, in a small stoppered percolator, belladonna leaves, in No. 60 powder, 10 Gm., with 50 mils of a mixture of chloroform, 1 volume, and ether, 4 volumes; set aside for ten minutes, add 2 mils of solution of ammonia diluted with 3 mils of water, and set aside for one hour, shaking frequently. Then percolate slowly into a separator containing 6 mils of N/1 sulphuric acid diluted with 20 mils of water, continuing the percolation with 50 mils or more of the ether-chloroform mixture, added in small quantities until the drug is exhausted. Shake the separator well, draw off the acid liquid into a second separator, repeat the extraction of the ether-chloroform solution with two successive portions (each of 10 mils) of the diluted acid, make the mixed acid solutions alkaline with solution of ammonia, and shake out with three successive portions of 15, 15, and 5 mils of chloroform. Evaporate the mixed chloroformic solutions to dryness, dissolve the residue in 3 mils of ether, again evaporate to dryness, dissolve the residue in 10 mils of N/20 sulphuric acid, and titrate with N/20 sodium hydroxide solution, with tincture of cochineal as indicator. Finally, deduct from 10 the number of mils of the alkaline solution required, and multiply the difference by 0·1446, to ascertain the percentage of alkaloids in the leaves.

Caffeinæ Citras.—Caffeine, 100 Gm.; powdered citric acid 100 Gm.; mix, moisten with distilled water, 16 mils, and dry on a water bath. [*Same as B.P.C.*

Caffeinæ Citras Effervescens.—Formula and process unaltered.

Charta Sinapis.—Formula omitted.

Cinchonæ Rubræ Cortex.—Yields from 5 to 6 per cent. of total alkaloids, of which not less than half consists of quinine and cinchonidine, when assayed as follows:—Mix red cinchona bark, in No. 60 powder, 10 Gm., with calcined hydroxide, 6 Gm., add water, 22 mils, mix intimately in a small porcelain dish or mortar, and set aside for an hour or two. Then transfer to a flask with reflux condenser, add 130 mils of benzolated amylic alcohol, boil for thirty minutes, and decant the liquid on to a filter; repeat this operation twice with more of the benzolated amylic alcohol, then transfer the contents of the flask to the filter, and exhaust the drug by washing with more of the solvent. Next add to the collected filtrate in a separator 2 mils of diluted hydrochloric acid mixed with 12 mils of water. Shake well, separate the acid liquid, and repeat the operation with water slightly acidified with hydrochloric acid, until the alkaloids have been completely removed. Neutralise the acid liquid while warm with solution of ammonia, concentrate by evaporation to 16 mils, add about 1·5 Gm. of sodium potassium tartrate dissolved in twice its weight of water, set aside for one hour, collect the precipitate, wash, dry at 100°, and weigh. The weight multiplied by 8 gives the percentage of quinine and cinchonidine in the bark. Next add solution of ammonia in slight excess to the mother-liquor and washings, shaking the mixture with three successive portions (each of 10 mils) of chloroform, evaporate the mixed chloroformic solutions to dryness, dry the residue at 110°, and weigh. The weight multiplied by 10, and added to the percentage weight of quinine and cinchonidine, gives the percentage of total alkaloids.

Collodium.—Pyroxylin, 21 Gm.; ether (s.g. 0·720), 750 mils; alcohol (90 p.c.), 250 mils. [*Modified.*

Collodium Flexile.—Collodion, 940 mils; Canada turpentine, 40 Gm.; castor oil, 20 Gm. [*Modified.*

Collodium Vesicans.—Pyroxylin, 25 Gm.; powdered cochineal, 10 Gm.; blistering liquid, to 1,000 mils. [*Now coloured.*

Confectio Piperis.—Formula unaltered.

Confectio Rosæ Gallicæ.—Formula unaltered.

Confectio Sennæ.—Proportion of senna increased to 1 per cent. [*Modified.*

Confectio Sulphuris.—Precipitated sulphur, 450 Gm.; acid potassium tartrate, 110 Gm.; powdered tragacanth, 5 Gm.; syrup, 210 mils; tincture of orange, 55 mils; glycerin, 170 mils. Mix. [*Modified.*

Decoctum Acaciæ Corticis.—Acacia bark, bruised, 60 Gm.; distilled water, to 1,000 mils. Dose: 15 to 60 mils ($\frac{1}{2}$ to 2 fl. ounces). Boil the drug with 1,200 mils of water for 10 minutes; then strain, and, if necessary, pour sufficient water over contents of strainer to produce required volume. [*From I.C.A.*

Decoctum Agropyri.—Couch grass, cut small, 50 Gm.; distilled water, to 1,000 mils. Dose: 15 to 60 mils ($\frac{1}{2}$ to 2 fl. ounces). Process as Decoctum Acaciæ Corticis. [*From I.C.A.*

Decoctum Aloes Compositum.—Saffron omitted. [*Modified.*

Decoctum Gossypii Radicis Corticis.—Cotton root bark, bruised, 200 Gm.; distilled water, to 1,000 mils. Dose: 15 to 60 mils (½ to 2 fl. ounces). Boil the drug with 2,000 mils of water until the volume is reduced to half; then strain and, if necessary, pour sufficient water over contents of strainer to produce required volume. [*From I.C.A.*

Decoctum Granati Corticis.—Formula omitted.

Decoctum Hæmatoxyli.—Proportion of cinnamon bark increased by 25 per cent. [*Modified.*

Decoctum Ispaghulæ.—Ispaghula, bruised, 15 Gm.; distilled water, to 1,000 mils. Dose: 15 to 60 mils (½ to 2 fl. ounces). Process as that for Decoctum Acaciæ Corticis. [*From I.C.A.*

Decoctum Sappan.—Sappan, in chips, 50 Gm.; cinnamon bark, bruised, 10 Gm.; distilled water, to 1,000 mils. Dose: 15 to 60 mils (½ to 2 fl. ounces). Process as that for Decoctum Acaciæ Corticis, except that cinnamon is added towards the end of the boiling. [*From I.C.A.*

Emplastrum Ammoniaci cum Hydrargyro. — Formula omitted.

Emplastrum Belladonnæ.—Liquid extract of belladonna, 50 mils; resin plaster, 137·5 Gm. [*50 p.c. weaker.*

Emplastrum Calefaciens.—Cantharidin, 0·2 Gm.; chloroform, 20 mils; olive oil, 40 mils; resin plaster, 940 Gm. Dissolve cantharidin in chloroform, add the oil, and mix with the previously melted plaster. [*Modified.*

Emplastrum Cantharidini.—Cantharidin, 2 Gm.; chloroform, 100 mils; yellow beeswax, 450 Gm.; wool fat, to 1,000 Gm. Dissolve cantharidin in chloroform, add to the previously melted wax and fat, and stir till cold. [*Same as B.P.C.*

Emplastrum Cantharidis.—Formula omitted.

Emplastrum Hydrargyri.—Mercury, 328 Gm.; olive oil, 18 Gm.; sublimed sulphur, 2 Gm.; lead plaster, 652 Gm. Proportion of oil increased. [*Modified.*

Emplastrum Menthol.—Formula unaltered.

Emplastrum Opii.—Formula omitted.

Emplastrum Picis.—Formula omitted.

Emplastrum Plumbi.—Formula unaltered.

Emplastrum Plumbi Iodidi.—Formula omitted.

Emplastrum Resinæ.—Resin, 10; lead plaster, 85; hard soap, 5. Proportion of lead plaster increased. [*Modified.*

Emplastrum Saponis.—Hard soap, 140 Gm.; lead plaster, 835 Gm.; resin, 25 Gm. [*Modified.*

Extractum Agropyri Liquidum.—Couch grass, cut small, 1,000 Gm., boiling distilled water, 10,000 mils. Boil for 30 minutes, strain, evaporate to 750 mils, cool, make up to 1,000 mils with alcohol (90 p.c.), and filter. Dose: 4 to 8 mils (1 to 2 fl. drachms). [*From I.C.A.*

Extractum Aloes.—Formerly named Extractum Aloes Barbadensis, but may now be made from Curaçao, Socotrine, or Zanzibar aloes. Formula and process unaltered.

Extractum Aloes Barbadensis.—Now named Extractum Aloes.

Extractum Anthemidis.—Formula omitted.

Extractum Belæ Liquidum.—Bael fruit, bruised, 1,000 Gm.; chloroform water, 15,000 mils. Macerate for 12 hours in one-third of the chloroform water, pour off the liquid, and twice repeat the maceration, for one hour in each case, with one-third of the water. Press the marc, strain the mixed liquids through flannel, evaporate to 750 mils, cool, and make up to 1,000 mils with alcohol (90 p.c.). Dose: 4 to 8 mils (1 to 2 fl. drachms). [*From I.C.A.*

Extractum Belladonnæ Alcoholicum.—Now known as Extractum Belladonnæ Siccum, and made from belladonna leaves.

Extractum Belladonnæ Liquidum.—Formula and process unaltered, but the method of standardisation is modified. Determine the proportion of alkaloids in the strong percolate as follows:—Shake vigorously in a separator 10 mils of the strong percolate, 50 mils of water, 2 mils of diluted sulphuric acid, and 10 mils of chloroform; set aside till separation is complete, draw off the lower layer, wash it with two separate portions (each of 10 mils) of water acidified with sulphuric acid, and add the washings to the liquid in the separator. Make the mixture distinctly alkaline with solution of ammonia, extract the alkaloids by shaking with three separate portions (each of 10 mils) of chloroform, mix the chloroformic solutions, shake with 10 mils of water, allow to separate, draw off the lower layer, and set aside for the chloroform to evaporate. Heat the residue on a water-bath for thirty minutes, add 10 mils of N/20 sulphuric acid, warm gently till dissolved, and titrate back with N/20 sodium hydroxide solution, with tincture of cochineal as indicator. On deducting from 10 the number of mils of the alkaline solution required, the remainder multiplied by 0·01446 gives the percentage w/v of alkaloid in the strong percolate. Sufficient of the alcoholic menstruum is then added to the remainder of the strong percolate to produce a liquid extract containing 0·75 per cent. w/v of the alkaloids of belladonna root. The same process of determination is used for assay purposes. Limit of error, 0·05 Gm.

Extractum Belladonnæ Siccum.—Determine the proportion of alkaloids present in 10 Gm. of the belladonna leaves, reduced to No. 60 powder, by the process described under Belladonnæ Folia. Then moisten 1,000 Gm. of the leaves in No. 40 powder with alcohol (70 per cent.), and proceed as in the preparation of Extractum Belladonnæ Exsiccatum, B.P.C. Determine the proportion of total solids in the percolate by evaporating 20 mils of the percolate, drying the residue at 80°, and weighing; also determine the proportion of alkaloids in the percolate by the process described under Tinctura Belladonnæ, taking 40 mils of the percolate in place of 100 mils of the tincture. Calculate the amount of total solids and alkaloids in the remainder of the percolate, and the amount of the powdered belladonna leaves that must be added to afford a dry extract containing 1 per cent. of alkaloids. Add to the percolate rather less than the required amount of powdered leaves, recover the alcohol by distillation, and dry the residue in a tared dish, first on a water-bath, and finally in a current of air at 60° to 80°. Weigh the dish and contents, add the additional amount of powdered leaves required, mix in a dry, slightly warmed mortar, pass through a No. 20 sieve, transfer to a well-stoppered bottle, and preserve in a cool, dry place. The extract may be assayed by the following process:—Slightly moisten 5 Gm. with a mixture of acetic acid, 1 volume, and alcohol (70 per cent.), 9 volumes; then pack in a percolator and percolate with the same menstruum till 50 mils of liquid has been collected. Then proceed as described under Tinctura Belladonnæ, using 50 mils of percolate in place of 100 mils of the tincture. Limit of error, 0·05 Gm. Corresponds to Extractum Belladonnæ Exsiccatum, B.C.P. Contains 1 per cent. of alkaloids. Dose: 16 to 60 milligrams ($\frac{1}{4}$ to 1 grain). [*Modified.*

Extractum Belladonnæ Viride.—Formula omitted.

Extractum Cannabis Indicæ.—Unaltered.

Extractum Cascaræ Sagradæ.—Now known as Extractum Cascaræ Sagradæ Siccum.

Extractum Cascaræ Sagradæ Liquidum.—Now contains 25 per cent. more alcohol (90 p.c.). [*Modified.*

Extractum Cascaræ Sagradæ Siccum.—Formerly named Extractum Cascaræ Sagradæ, and the latter name is retained as a synonym.

Extractum Cimicifugæ Liquidum.—Formula omitted.

Extractum Cinchonæ Liquidum.—Formula and process unaltered, except that sodium hydroxide solution now replaces potassium hydroxide solution as a precipitating agent. Determine the proportion of alkaloids by the following process—Shake 5 mils of the liquid extract with 15 mils of benzolated amylic alcohol and 10 mils of N/1 alcoholic potassium hydroxide solution, set the separator aside in a warm place for a few minutes, shake occasionally, and then separate the liquids. Pour off the clear upper layer, twice repeat the shaking with 15 and 10 mils respectively of benzolated amylic alcohol, shake the mixed alcoholic liquids with two separate 5 mils of water, and then with a warm mixture of diluted hydrochloric acid, 12 mils, and water, 60 mils, using three successive portions of 30, 30, and 12 mils. Next shake the mixed acid liquid with 15 mils of chloroform and excess of solution of ammonia, and draw off the separated chloroformic layer into a tared dish. Repeat the shaking with 10 mils of chloroform, and again repeat until the aqueous liquid, after acidification with diluted sulphuric acid, gives no further precipitate with potassio-mercuric iodide solution. Mix all the chloroformic solutions, allow to evaporate slowly, dry the residue at 110°, and weigh. Having thus determined the weight of total alkaloids in 5 mils of the liquid extract, adjust the strength of the latter as at present. Limit of error, 0·2 Gm.

Extractum Cocæ Liquidum.—Formula omitted.

Extractum Colchici.—Formula and process unaltered.

Extractum Colocynthidis Compositum.—Now contains one-fourth less curd soap. [*Modified.*

Extractum Ergotæ.—Ergot, crushed, 1,000 Gm., is twice macerated with distilled water; after straining and pressure, the mixed liquids are evaporated to 500 mils. Add 650 mils of alcohol (90 p.c.), set aside for three days, stirring occasionally; filter, and evaporate filtrate to a soft extract. The synonym "Ergotin" is omitted. [*Modified.*

Extractum Ergotæ Liquidum.—Formula unaltered.

Extractum Euonymi.—Formerly named Extractum Euonymi Siccum. Formula and process unaltered.

Extractum Euonymi Siccum.—Now known as Extractum Euonymi.

Extractum Filicis Liquidum.—Formula and process unaltered. S.g. not less than 1·000. Refractive index at 40° not less than 1·490. Contains not less than 20 p.c. of filicin. The proportion of filicin is determined as follows:—Dissolve 5 Gm. of the liquid extract in 40 mils of ether, shake for five minutes with 100 Gm. of barium hydroxide solution, separate, filter off 86 Gm. of the aqueous liquid, acidify this with hydrochloric acid, extract with three successive portions of ether—30, 20, and 15 mils, evaporate the mixed ethereal solutions, dry the residue at 100°, and weigh.

Extractum Gentianæ.—Formula and process unaltered.

Extractum Glycyrrhizæ.—Chloroform water is used instead of distilled water. [*Modified.*

Extractum Glycyrrhizæ Liquidum.—Chloroform water replaces distilled water. [*Modified.*

Extractum Gossypii Radicis Corticis Liquidum.—Cotton root bark, in No. 30 powder, 1,000 Gm.; glycerin, 250 mils; alcohol (90 p.c.), to 1,000 mils. Percolate with the glycerin mixed with 750 mils of the alcohol, and continue the percolation with alcohol. Dose: 2 to 4 mils (½ to 1 fl. drachm). [*From I.C.A.*

Extractum Grindeliæ Liquidum.—Grindelia, in No. 40 powder, 1,000 Gm.; sodium bicarbonate, 100 Gm.; distilled water, 500 mils; alcohol (90 p.c.), to 1,000 mils. Exhaust the drug by percolation with alcohol, recover the alcohol by distillation, and neutralise the residue by dissolving in an aqueous solution of the sodium bicarbonate. Add distilled water to produce 750 mils and make up to 1,000 mils with alcohol. Dose: 6 to 12 decimils (10 to 20 minims). [*From I.C.A.*

Extractum Hamamelidis Liquidum.—Formula and process unaltered.

Extractum Hydrastis Liquidum.—Alcohol (60 p.c.) is now used to exhaust the drug, and the product should contain 2 per cent. w/v of hydrastine. The proportion of hydrastine is determined as follows:—Place 10 mils of the liquid extract in a 100-mil flask, add 20 mils of potassium iodide solution diluted with 60 mils of water, and make up to 100 mils with water. Shake for several minutes, filter, shake out 50 mils of the filtrate (rendered alkaline with solution of ammonia) with 30 mils of ether, separate, and repeat the shaking out with two separate 20 mils of ether. The weight of the dry residue from the mixed ethereal solutions represents the hydrastine in 5 mils of the liquid extract. Add to the remainder of the liquid extract sufficient alcohol (60 per cent.) to make the strength of the finished product 2 per cent. w/v. Limit of error, 0·1 Gm. [*Modified.*

Extractum Hyoscyami.—Exhaust Hyoscyamus leaves, in No. 40 powder, with alcohol (70 p.c.), and proceed as in th case of Extractum Belladonnæ Siccum, determining the proportion of alkaloids in the percolate by the process described under Tinctura Belladonnæ. Corresponds to Extractum Hyoscyami Exsiccatum, B.P.C. Contains 0·3 p.c. of alkaloids. Limit of error, 0·015 Gm. Dose: 12 to 50 centigrams (2 to 8 grains). [*New*

Extractum Hyoscyami Viride.—Formula omitted.

Extractum Ipecacuanhæ Liquidum.—Ipecacuanha root, in No. 120 powder, 1,000 Gm., is packed in a conical percolator and macerated with alcohol (90 per cent.), 200 mils, for 12 hours, then percolated with successive portions (200 mils each) of alcohol, added at intervals of twelve hours, until the percolate begins to appear. More alcohol is then added, 750 mils of percolate collected and reserved, percolation then continued to exhaustion, the alcohol recovered from the later percolate, and the residual extract dissolved in the reserved percolate. Determine the proportion of alkaloids as follows :—Shake 5 mils of the liquid extract in a separator, with 4 mils of water, 1 mil of diluted sulphuric acid, and 10 mils of ether. Separate the ethereal solution and again shake out with 5 mils of ether. Wash the separated ethereal solutions in a second separator with two separate 5 mils of water, add the washings to the contents of the first separator, shake the liquid with 10 mils of chloroform and excess of solution of ammonia, separate the chloroformic solution and filter it into a tared dish, twice repeat the shaking with chloroform, evaporate the mixed chloroformic solutions to about 2 mils, add 5 mils of ether, evaporate, dry below 80°, and weigh the residual alkaloids. Add to the remainder of the liquid extract sufficient alcohol (90 per cent.) to make the product contain 2 per cent. w/v of alkaloids. The liquid extract may also be assayed by the foregoing process. Limit of error, 0·1 Gm. [*Modified.*

Extractum Jaborandi Liquidum.—Formula omitted.

Extractum Jalapæ.—Formula omitted.

Extractum Kavæ Liquidum.—Kava rhizome, in No. 20 powder, 1,000 Gm., is percolated with 2,000 mils of alcohol (90 p.c.), and the first 750 mils. of percolate reserved. Percolation is then continued with alcohol (45 p.c.) till the drug is exhausted. Most of the alcohol is recovered from the later percolate by distillation; the residue is evaporated below 80° to a soft extract, which is dissolved in the reserved percolate, and sufficient alcohol (90 p.c.) is then added to produce 1,000 mils. Dose: 2 to 4 mils (½ to 1 fl. drachm). [*From I.C.A.*

Extractum Krameriæ.—The krameria root should now be in No. 10 powder. [*Modified.*

Extractum Nucis Vomicæ.—Now known as Extractum Nucis Vomicæ Siccum, and process modified so as to produce a dry extract in fine powder.

Extractum Nucis Vomicæ Liquidum.—Nux vomica, in No. 20 powder, 1,000 Gm., is exhausted by repercolation with alcohol (70 per cent.) until the percolate measures 500 mils, and the percolate is heated to 60° for a few minutes, with 15 Gm. of hard paraffin, in a closed vessel, with vigorous shaking; after cooling, the layer of paraffin is separated, the percolate filtered, and the proportion of strychnine it contains determined by the following process :—Evaporate 10 mils of the liquid extract on a water-bath to a syrupy consistence, dissolve the residue in 10 mils of warm water, and transfer to a separator, together with 10 mils of water used to wash the dish. Add 10 mils of chloroform and a solution of .5 Gm. of sodium carbonate in 25 mils of water, shake vigorously, set aside, and separate the chloroformic solutions. Twice repeat the extraction with chloroform, and extract the alkaloids from the mixed chloroformic solutions by shaking out with three 10 mils of N/1 sulphuric acid. Make the mixed acid solutions alkaline with solution of ammonia, shake out with 10, 5, and 5 mils respectively of chloroform, distil off the chloroform from the mixed chloroformic solutions in a small flask, dissolve the residue in 15 mils of water containing 3 per cent. of sulphuric acid, heat the solution to 50°, add 3 mils of a mixture of equal volumes of nitric acid and water, and set aside for ten minutes. Transfer the liquid to a separator, rinsing the flask with a little water made alkaline with sodium hydroxide solution, shake out the alkaloids with 10, 5, and 5 mils respectively of chloroform, wash the mixed chloroformic solutions with 5 mils of water, and allow the chloroform to evaporate in a tared dish, adding towards the end 5 mils of alcohol (90 per cent.) Evaporate to dryness, and the weight of the residue, dried at 100°, will be the weight of strychnine in 10 mils of the percolate. Add to the remainder of the percolate sufficient alcohol (70 per cent.) to make the product contain 1·5 per cent. w/v of strychnine. The extract may also be assayed by the foregoing process. Limit of error, 0·05 Gm. [*Modified.*

Extractum Nucis Vomicæ Siccum.—Formerly named Extractum Nucis Vomicæ, and the latter name is retained as a synonym. Evaporate 10 mils of liquid extract of nux vomica, dry at 100°, and deduct the weight of the residue from 3 Gm. to ascertain the weight of calcium phosphate to be added to each 10 mils of the liquid extract. Recover the alcohol from 100 parts by volume of the liquid extract, and add sufficient of the calcium phosphate, as indicated by the previous determination, to produce, when dried at 100° and reduced to a fine powder, 30 parts by weight The extract may be assayed by exhausting 3 Gm. with alcohol (70 per cent.) and testing by the process described under Extractum Nucis Vomicæ Liquidum; the yield of strychnine should be 0·15 Gm. (= 5 p.c.). Limit of error, 0·2 Gm. [*Modified.*

Extractum Opii.—Now named Extractum Opii Siccum, and process modified so as to produce a dry extract in powder form.

Extractum Opii Liquidum.—Mix dry extract of opium, 37·5 Gm., with distilled water, 700 mils, set aside in a cool place for 24 hours, stirring frequently; then add alcohol (90 per cent.), 200 mils, again set aside for 24 hours, filter, and wash the filter with sufficient distilled water to produce 1,000 mils. Contains 0·75 per cent. w/v of opium. Assay by the process described under Tinctura Opii. Limit of error, 0·05 Gm. S.g. not now stated.

Extractum Opii Siccum.—Formerly named Extractum Opii, and the latter name is retained as a synonym. Exhaust sliced opium with about five times its weight of distilled water, strain the liquid through flannel, ascertain its volume, and determine the percentage of morphine in 40 mils of the liquid, by the process described under Tinctura Opii. Determine also the percentage of total solids dried at 100°, and add to the remainder of the liquid sufficient calcium phosphate to yield an extract containing, when dried at 100°, 20 per cent. of morphine; then evaporate to dryness, powder, and dry at 100°. Contains 20 per cent. of morphine. Assay by the process described under Opium. Limit of error, 1 Gm. [*Modified.*

Extractum Pareiræ Liquidum.—Formula omitted.

Extractum Physostigmatis.—Formula omitted.

Extractum Picrorhizæ Liquidum.—Exhaust picrorhiza, in No. 60 powder, with alcohol (60 p.c.), recover the alcohol from the last portion of the distillate, dissolve the residue in the rest of the percolate, and add sufficient alcohol to make 1,000 mils represent 1,000 Gm. of the drug. Dose, 1 to 4 mils (15 to 60 minims). [*From I.C.A.*

Extractum Rhei.—Formula and process unaltered.

Extractum Sarsæ Liquidum.—Formula omitted.

Extractum Stramonii.—Formula omitted.

Extractum Strophanthi.—Formula and process unaltered.

Extractum Taraxaci.—Process unaltered.

Extractum Taraxaci Liquidum.—Formula omitted.

Extractum Viburni Liquidum.—Exhaust black haw in No. 40 powder, with alcohol (70 p.c.), and proceed as in the case of Extractum Picrorhizæ Liquidum. Dose: 4 to 8 mils (1 to 2 fl. drachms). [*From I.C.A*

Fel Bovinum Purificatum.—Process unaltered.

Ferri Arsenas—Formula omitted.

Ferri Carbonas Saccharatus.—Ferrous sulphate, 97·5 Gm.; glucose, 30 Gm.; sodium carbonate, 105 Gm.; distilled water, boiling, q.s. Dissolve half of the glucose in distilled water, 300 mils, and dissolve the ferrous sulphate in the solution. Dissolve the sodium carbonate in distilled water, 150 mils, and to this add the first solution, stirring constantly. Then add distilled water, 400 mils, mix thoroughly, let precipitate settle, wash it twice with 400 mils of distilled water, mix it with the remainder of the glucose, and dry at a temperature not exceeding 100°. Sodium carbonate replaces ammonium carbonate, and glucose takes the place of refined sugar as a preventive of oxidation. [*Modified.*

Ferri et Ammonii Citras.—Formula and process unaltered.

Ferri et Potassii Tartras.—Formerly named Ferrum Tartaratum. Formula and process unaltered.

Ferri et Quininæ Citras.—Formula and process unaltered.

Ferri Phosphas.—Now known as Ferri Phosphas Saccharatus, and process modified.

Ferri Phosphas Saccharatus. — Formerly named Ferri Phosphas. Ferrous sulphate, 120 Gm.; sodium phosphate, 110 Gm.; sodium carbonate, 50 Gm.; glucose, 40 Gm.; distilled water, boiling, q.s. Dissolve half of the glucose in 400 mils of distilled water, and dissolve the ferrous sulphate in the solution. Dissolve the sodium phosphate in 400 mils of distilled water and add the solution of ferrous sulphate, stirring constantly; then add the sodium carbonate, previously dissolved in 400 mils of distilled water. Mix thoroughly, let precipitate settle, wash it twice with 2,000 mils of distilled water, mix it with the remainder of the glucose, dry at a temperature not exceeding 100°, and powder the product. Sodium carbonate replaces sodium bicarbonate, and glucose is added as a preservative. [*Modified.*

Ferrum Tartaratum.—Now known as Ferri et Potassii Tartras.

Glycerinum Acidi Borici.—Formula unaltered.

Glycerinum Acidi Carbolici.—Formula unaltered.

Glycerinum Acidi Tannici.—Formula unaltered.

Glycerinum Aluminis.—Formula unaltered.

Glycerinum Amyli.—Formula unaltered.

Glycerinum Boracis.—Formula unaltered.

Glycerinum Pepsini.—Pepsin, 100 Gm.; hydrochloric acid, 11·5 mils; glycerin, 600 mils; distilled water, to 1,000 mils, Contains 10 per cent. w/v of pepsin. [*Modified.*

Glycerinum Plumbi Subacetatis.—Strong solution of lead subacetate, 500 mils, is evaporated to dryness on a water-bath; add glycerin 500 mils, warm gently until solution is effected, cool, and add distilled water till the product is of s.g. 1·48. Filter if necessary. [*Modified.*

Glycerinum Tragacanthæ.—Formula unaltered.

Hydrargyri Oleas.—Now known as Hydrargyrum Oleatum, and process modified.

Hydrargyrum Ammoniatum.—Formula unaltered, but product is to be dried at a temperature not exceeding 30°.

Hydrargyrum cum Creta.—Formula unaltered.

Hydrargyrum Oleatum.—Formerly named Hydrargyri Oleas. Yellow mercuric oxide, 20 Gm., is triturated with liquid paraffin, 5 Gm., until thoroughly subdivided, and oleic acid, 75 Gm., is then added with vigorous stirring. Heat the mixture to 50°, and triturate occasionally until combination is effected; then cool. [*Modified.*

Infusum Alstoniæ.—Alstonia, bruised, 50 Gm.; distilled water, boiling, 1,000 mils. Infuse for thirty minutes and strain while hot. Dose, 15 to 30 mils. (½ to 1 fl. ounce). [*From I.C.A.*

Infusum Aurantii.—Formula unaltered.

Infusum Aurantii Compositum.—Proportions of lemon peel and cloves reduced by one-fifth. [*Modified.*

Infusum Buchu.—Formula unaltered.

Infusum Calumbæ.—Formula unaltered, but calumba root to be cut small.

Infusum Caryophylli.—Formula unaltered.

Infusum Cascarillæ.—Formula unaltered.

Infusum Chiratæ.—Formula unaltered.

Infusum Cinchonæ Acidum.—Formula unaltered.

Infusum Cuspariæ.—Formula omitted.

Infusum Digitalis.—Digitalis leaves, in No. 20 powder, 7 Gm.; distilled water, boiling, 1,000 mils. [*3 p.c. stronger*

Infusum Ergotæ.—Formula unaltered.

Infusum Gentianæ Compositum.—Formula unaltered.

Infusum Krameriæ.—Formula unaltered.

Infusum Lupuli.—Formula omitted.

Infusum Quassiæ.—Formula unaltered.

Infusum Rhei.—Formula unaltered.

Infusum Rosæ Acidum.—Formula unaltered.

Infusum Scoparii.—Formula unaltered.

Infusum Senegæ.—Formula unaltered.

Infusum Sennæ.—Proportion of ginger is now reduced by one-fifth. [*Modified.*

Infusum Serpentariæ.—Formula omitted.

Infusum Uvæ Ursi.—Formula unaltered.

Injectio Apomorphinæ Hypodermica.—Formula unaltered, but only half of the distilled water is added to the acid before dissolving the apomorphine hydrochloride, and the required volume is made up subsequently.

Injectio Cocainæ Hypodermica.—Cocaine hydrochloride reduced in quantity by half. Dose: 3 to 6 decimils (5 to 10 minims). [*50 p.c. weaker.*

Injectio Ergotæ Hypodermica.—Formula unaltered, but the distilled water is boiled and cooled before dissolving the extract and phenol therein. Dose: 3 to 6 decimils (5 to 10 minims).

Injectio Morphinæ Hypodermica.—Morphine tartrate reduced in quantity by half. Dose: 3 to 6 decimils (5 to 10 minims). [*50 p.c. weaker.*

Injectio Strychninæ Hypodermica.—Strychnine hydrochloride, 0·75 Gm., is dissolved in sufficient recently boiled and cooled distilled water to produce 100 mils. Dose: 3 to 6 decimils (5 to 10 minims). [*New.*

Ipecacuanhæ Radix.—Yields not less than 2 per cent. of alkaloids when assayed as follows:—Shake frequently during five minutes ipecacuanha root in No. 60 powder, 7 Gm., with 70 mils of a mixture of chloroform, 1, and ether 3; add solution of ammonia, 5 mils, and shake frequently during one hour, then add water, 5 mils, or q.s. to make the powder agglomerate on shaking violently. Shake 50 mils of the clear liquid with 10 mils of N/10 hydrochloric acid, and then with three successive 3 mils of water, mix the aqueous solutions, make alkaline with ammonia, and shake out with 10, 5, 5, and 5 mils respectively of a mixture of ether, 6, and chloroform, 1. On evaporating the mixed ethereal solutions, the residue, after drying at 80°, should weigh not less than 0·1 Gm. Limit of error, 0·1 Gm.

Ipecacuanhæ Radix (Powdered).—When used for official purposes other than the production of standardised preparations, powdered ipecacuanha root must be mixed, if necessary, with powdered milk sugar, so as to adjust its strength to the required standard of 2 per cent. of alkaloids. Assay as described under Ipecacuanhæ Radix.

Jalapæ Resina.—Jalap, coarsely powdered, is exhausted with alcohol (90 per cent.), most of the alcohol recovered by distillation, and the remaining concentrated solution poured into eight times its volume of distilled water; the separated resin is allowed to subside, then washed, and dried at a gentle heat. [*Modified.*

Kaladanæ Resina.—Obtained from kaladana by the same process as that for Jalapæ Resina. Dose: 12 to 50 centigrams (2 to 8 grains). [*From I.C.A.*

Lamellæ Atropinæ.—Atropine sulphate, 0·016 Gm.; gelatin-glycerin basis, 8·8 Gm. The basis is prepared with gelatin, 18 Gm.; glycerin, 2 Gm.; and distilled water, 88 Gm. The finished discs measure nearly 3 millimetres ($\frac{1}{8}$ inch) in diameter, each weighing about 1·3 milligrams (1/50 grain) and containing 0·013 milligram (1/5000 grain) of atropine sulphate.

Lamellæ Cocainæ.—Cocaine hydrochloride, 1·65 Gm.; gelatin-glycerin basis, 15 Gm. Proceed as in the case of Lamellæ Atropinæ. Each disc weighs about 3·5 milligrams (1/20 grain), and contains 1·3 milligrams (1/50 grain) of cocaine hydrochloride.

Lamellæ Homatropinæ.—Homatropine hydrobromide, 0·82 Gm.; gelatin-glycerin basis, 10·1 Gm. Proceed as in the case of Lamellæ Atropinæ. Each disc weighs about 2·1 milligrams (1/32 grain), and contains 0·65 milligram of homatropine hydrobromide.

Lamellæ Physostigminæ.—Physostigmine sulphate, 0·082 Gm.; gelatin-glycerin basis, 8·45 Gm. Proceed as in the case of Lamellæ Atropinæ. Each disc weighs about 1·3 milligrams (1/50 grain), and contains 0·065 milligram (1/1000 grain) of physostigmine sulphate.

Linimentum Aconiti.—Aconite root, in No. 40 powder, 500 Gm., is exhausted by percolation with alcohol (90 per cent.), the first 750 mils of percolate reserved, and the syrupy remainder left on evaporating the rest of the percolate added to this; the weight of ether-soluble alkaloids in 15 mils of tho liquid is then determined by the process described under Aconiti Radix, and sufficient camphor and alcohol added to the mixed percolate to produce a preparation containing 0·2 Gm. of the ether-soluble alkaloids and 3 Gm. of camphor in 100 mils. The liniment may also be assayed by the foregoing process. Limit of error, 0·01 Gm. [*Modified.*

Linimentum Ammoniæ.—Formula unaltered.

Linimentum Belladonnæ.—Formula unaltered.

Linimentum Calcis.—Formula unaltered.

Linimentum Camphoræ.—Camphor, in flowers, 200 Gm. olive oil, 800 Gm. The oil is now weighed, and the liniment contains 20 p.c. by weight of camphor. [*6·8 p.c. weaker.*

Linimentum Camphoræ Ammoniatum.—Proportion of oil of lavender reduced by one-fifth. [*Modified.*

Linimentum Chloroformi.—Formula unaltered.

Linimentum Crotonis.—Croton oil, 120 mils; oil of cajuput, 440 mils; alcohol (90 per cent.), 440 mils. [*Slightly weaker*

Linimentum Hydrargyri.—Ointment of mercury, 50 Gm.; solution of ammonia, 40 mils; liniment of camphor, 80 mils. Shake the liquids together and triturate the ointment with the mixture. [*40 p.c. weaker.*

Linimentum Opii.—Formula unaltered, but the tincture of opium used is one-third stronger. [*33·3 p.c. stronger.*

Linimentum Potassii Iodidi cum Sapone.—Proportion of oil of lemon reduced by one-fifth. The soap is mixed with the distilled water and glycerin in a tared dish, and when it is dissolved more water is added to make up to the original weight. [*Modified.*

Linimentum Saponis.—Soft soap, 80 Gm.; camphor, 40 Gm.; oil of rosemary, 15 mils; distilled water, 170 mils; alcohol (90 per cent.) to 1,000 mils. Dissolve the soap, camphor, and oil in 600 mils of alcohol, add the water and sufficient alcohol to produce 1,000 mils, set aside for a week, and filter. [*Modified.*

Linimentum Sinapis.—Volatile oil of mustard, 35 mils; camphor, 55 Gm.; castor oil, 125 mils; alcohol (90 per cent.), to 1,000 mils. [*Modified.*

Linimentum Terebinthinæ.—Formula unaltered.

Linimentum Terebinthinæ Aceticum.—Glacial acetic acid, 110 mils; liniment of camphor, 445 mils; rectified oil of turpentine, to 1,000 mils. [*Modified.*

Liquor Acidi Chromici.—Chromic anhydride, 25 Gm.; distilled water to 100 mils. [*Modified.*

Liquor Adrenalini Hydrochloricus.—Adrenalin, 1 Gm.; chloroform, 5 mils; sodium chloride, 9 Gm.; diluted hydrochloric acid, 3 mils; distilled water, recently boiled and cooled, to 1,000 mils. Dissolve chloroform and salt in 900 mils of the water, add the acid, dissolve the adrenalin in the mixture, and make up to the required volume. Preserve in amber glass bottles. Dose: 6 to 18 decimils (10 to 30 minims). Practically the same as B.P.C. Liquor Adreninæ Hydrochloricus.

Liquor Ammoniæ.—Formula unaltered.

Liquor Ammoniæ Fortis.—Strength unaltered, but tests modified. S.g., 0·888.

Liquor Ammonii Acetatis.—Acetic acid (33 per cent.), 162·5 mils, is mixed with 500 mils of distilled water and neutralised with ammonium carbonate, after which sufficient distilled water is added to produce 1,000 mils. Process now reversed. S.g., 1·016. [*Modified.*

Liquor Ammonii Citratis.—Formula unaltered. S.g., 1·057.

Liquor Arsenicalis.—Proportion of compound tincture of lavender reduced by one-twenty-fifth. [*Modified.*

Liquor Arsenici Hydrochloricus.—Proportion of hydrochloric acid reduced by one-twenty-fifth. [*Modified.*

Liquor Arsenii et Hydrargyri Iodidi.—Formula unaltered, but synonym "Donovan's Solution" added.

Liquor Atropinæ Sulphatis.—No salicylic acid is now added. [*Modified.*

Liquor Bismuthi et Ammonii Citratis.—Bismuth oxynitrate, 70 Gm., and citric acid, 52 Gm., are mixed together in a mortar with 20 mils of distilled water. After standing, with occasional stirring, for half an hour, transfer the mixture to a beaker, using 400 mils of distilled water to rinse the mortar; allow the precipitate to settle, decant the clear liquid, wash the precipitate with three successive 400 mils of distilled water. dissolve the washed precipitate by adding just sufficient solution of ammonia, and make up to 1,000 mils with distilled water. [*Modified.*

Liquor Calcis.—Formula unaltered.

Liquor Calcis Chlorinatæ.—Formula unaltered, but s.g. omitted.

Liquor Calcis Saccharatus.—Formula unaltered.

Liquor Calumbæ Concentratus.—Formula omitted.

Liquor Caoutchouc.—Formula omitted.

Liquor Chiratæ Concentratus.—Formula omitted.

Liquor Cresol Saponatus.—Cresol, 500 Gm., is mixed with castor oil, 350 Gm., and the mixture heated to 80°; a solution of potassium hydroxide, 80 Gm., in distilled water, 70 mils, is then added, and the mixture heated until one volume of it forms a clear liquid with ten volumes of distilled water. Finally, cool and make up to 1,000 mils with distilled water. [*New.*

Liquor Cuspariæ Concentratus.—Formula omitted.

Liquor Epispasticus.—Cantharidin, 4 Gm.; castor oil, 25 mils; resin, 12 Gm.; acetone, to 1,000 mils. [*Modified.*

Liquor Ethyl Nitritis.—Formula unaltered.

Liquor Ferri Acetatis.—Formula omitted.

Liquor Ferri Perchloridi.—Formula unaltered, but s.g. omitted. [*Slightly weaker.*

Liquor Ferri Perchloridi Fortis.—Proportion of iron reduced by one-eighth. S.g., about 1·49. Contains 20 Gm. of iron in 100 mils. [*11·1 p.c. weaker.*

Liquor Ferri Pernitratis.—Formula omitted.

Liquor Ferri Persulphatis.—Formula unaltered.

Liquor Formaldehydi.—An aqueous solution containing from 36 to 38 per cent. of formaldehyde in 100 mils. S.g., 1·079 to 1·081. [*New.*

Liquor Formaldehydi Saponatus.—Soft soap, 400 Gm., is dissolved in alcohol (90 per cent.), 300 mils, solution of formaldehyde, 200 mils, is added, and the volume made up to 1,000 mils with distilled water. [*New.*

Liquor Hamamelidis.—Fresh hamamelis leaves, 1,000 Gm.; distilled water, 2,000 mils; alcohol (90 per cent.), 160 mils. Macerate for twenty-four hours and then distil 1,000 mils. Proportion of alcohol reduced.

Liquor Hydrargyri Nitratus Acidus.—Formula unaltered.

Liquor Hydrargyri Perchloridi.—Mercuric chloride, 1 Gm.; distilled water, to 1,000 mils [*12·28 p.c weaker.*

Liquor Hydrogenii Peroxidi.—Process unaltered, but volumetric test altered.

Liquor Iodi Fortis.—Now known as Tinctura Iodi Fortis.

Liquor Krameriæ Concentratus.—Formula omitted.

Liquor Magnesii Carbonatis.—Now known as Liquor Magnesii Bicarbonatis.

Liquor Magnesii Bicarbonatis.—Formerly named Liquor Magnesii Carbonatis. Formula unaltered.

Liquor Morphinæ Acetatis.—Formula unaltered.

Liquor Morphinæ Hydrochloridi.—Formula unaltered.

Liquor Morphinæ Tartratis.—Formula unaltered.

Liquor Pancreatis.—Pancreas, freed from fat and external membrane and finely divided, 250 Gm., is macerated for seven days with a mixture of alcohol (90 per cent.), 250 mils, glycerin, 200 mils, and distilled water, sufficient to produce 1,000 mils; then filter. Test modified. Dose: 4 to 8 mils (1 to 2 fl. drachms). Glycerin now added. [*Modified.*

Liquor Picis Carbonis.—Formula unaltered.

Liquor Plumbi Subacetatis Dilutus.—Strong solution of lead subacetate, 12·5 mils; distilled water, recently boiled and cooled, to 1,000 mils. Alcohol is now omitted. [*Modified.*

Liquor Plumbi Subacetatis Fortis.—Formula unaltered, but tests modified.

Liquor Potassæ.—Potassium hydroxide, 5 Gm.; water, to 100 mils. S.g., 1·045. Contains 1·19 Gm. less in 100 mils than formerly. [*19·22 p.c. weaker.*

Liquor Potassii Permanganatis.—Formula unaltered.

Liquor Quassiæ Concentratus.—Formula omitted.

Liquor Rhei Concentratus.—Formula omitted.

Liquor Sarsæ Compositus Concentratus.—Formula omitted.

Liquor Senegæ Concentratus.—Formula omitted.

Liquor Sennæ Concentratus.—Formula omitted.

Liquor Serpentariæ Concentratus.—Formula omitted.

Liquor Sodæ Chlorinatæ.—Formula unaltered.

Liquor Sodii Arsenatis.—Formula unaltered.

Liquor Sodii Ethylatis.—Formula omitted.

Liquor Strychninæ Hydrochloridi.—Formula unaltered.

Liquor Thyroidei.—Formula omitted.

Liquor Trinitrini.—Formula unaltered.

Liquor Zinci Chloridi.—Formula unaltered.

Lithii Citras Effervescens.—Formula unaltered.

Lotio Hydrargyri Flava.—Formula unaltered.

Lotio Hydrargyri Nigra.—Mucilage of tragacanth now omitted. [*Modified.*

Magnesii Sulphas Effervescens.—Formula unaltered.

Mel Boracis.—Purified borax, in powder, 10 Gm.; glycerin, 5 Gm.; purified honey, 85 Gm. Proportion of borax slightly reduced. [*Modified.*

Mistura Ammoniaci.—Ammoniacum, in coarse powder, 30 Gm.; syrup of tolu, 60 mils; distilled water, to 1,000 mils.

Mistura Amygdalæ.—Compound powder of almonds, 125 Gm.; distilled water, to 1,000 mils.

Mistura Creosoti.—Formula omitted.

Mistura Cretæ.—Prepared chalk, 30 Gm.; tragacanth, in powder, 5 Gm.; refined sugar, 60 Gm.; cinnamon water, to 1,000 mils Proportion of tragacanth increased. [*Modified.*

Mistura Ferri Composita.—Ferrous sulphate, in powder, 6 Gm.; potassium carbonate, 8 Gm.; myrrh, 15 Gm.; gum acacia, in powder, 15 Gm.; glucose, 15 Gm.; spirit of nutmeg, 10 mils; rose water, to 1,000 mils. Gum acacia is now added and glucose replaces refined sugar. Powder the myrrh, add the potassium carbonate, glucose, and gum, and form a smooth paste by triturating the mixture with a small quantity of the rose water; gradually add more rose water and the spirit, continue the trituration and add rose water until the liquid measures 1,000 mils. Finally, add the ferrous sulphate and shake till dissolved. [*Modified.*

Mistura Guaiaci.—Guaiacum resin, 25 Gm.; refined sugar, 25 Gm.; tragacanth, in powder, 5 Gm.; cinnamon water, to 1,000 mils. Proportion of tragacanth increased. [*Modified.*

Mistura Olei Ricini.—Castor oil, 375 mils; gum acacia, in powder, 100 Gm.; orange-flower water, undiluted, 150 mils; cinnamon water, to 1,000 mils. Gum acacia replaces mucilage, and proportion of orange-flower water is increased. Triturate the oil with the gum in a dry mortar, add 200 mils of cinnamon water in one portion, and triturate till the oil is completely emulsified; then, with constant trituration, add the orange-flower water and make up the required volume with cinnamon water. [*Modified.*

Mistura Sennæ Composita.—Formula unaltered.

Mistura Spiritus Vini Gallici.—Formula omitted.

Mucilago Acaciæ.—Formula unaltered, except that gum is not ordered in small pieces. Should be recently prepared.

Mucilago Gummi Indici.—Indian gum, 50 Gm.; distilled water, 150 mils. Rapidly rinse the gum with a little water, then dissolve in a closed vessel and strain. Should be recently prepared. [*From I.C.A.*

Mucilago Tragacanthæ.—Tragacanth, in powder, 1·25 Gm.; alcohol (90 per cent.), 2·5 mils; distilled water, to 100 mils. Mix the tragacanth with the alcohol, add the water quickly, and shake vigorously. Proportion of tragacanth slightly reduced. [*Modified.*

Nux Vomica.—Yields not less than 1·25 per cent. of strychnine when assayed as follows:—Shake frequently during half an hour, nux vomica in No. 60 powder, 7·5 Gm., with a mixture of chloroform, 25 mils, ether, 50 mils, and solution of ammonia, 5 mils. Shake out the alkaloids from 50 mils of the clear ethereal liquid with three successive 10 mils of N/1 sulphuric acid, render the separated acid solutions alkaline with ammonia, and again shake out the alkaloids with 10, 5, and 5 mils respectively of chloroform, recover the chloroform by distillation, dissolve the residue in 5 mils of diluted sulphuric acid and 10 mils of water, heat to 50°, add 3 mils of a mixture of equal volumes of nitric acid and water, and set aside for 10 minutes. Transfer the solution to a separator, rinsing the flask with a little water made alkaline with sodium hydroxide solution, shake out the alkaloids with 10, 5, and 5 mils respectively of chloroform, wash the mixed chloroformic solutions with 5 mils of water, and allow the chloroform to evaporate in a tared dish, adding towards the end 5 mils of alcohol (90 per cent.). Evaporate to dryness, dry the residue at 100°, weigh, and multiply the weight by 20 to obtain the percentage of strychnine in the powdered nux vomica. Limit of error, 0·05 Gm.

Nux Vomica (Powdered).—When used for official purposes other than the production of standardised preparations, powdered nux vomica must be mixed, if necessary, with powdered milk sugar so as to adjust its strength to the required standard of 1·25 per cent. of strychnine. Assay as described under Nux Vomica.

Oleum Phosphoratum.—Phosphorus, 1 Gm.; almond oil, previously heated to 150°, cooled and filtered, 98 Gm.; oil of lemon, 1 Gm. Dissolve the phosphorus by adding it to the almond oil in a stoppered bottle, warming to 80°, and shaking; then cool and add the oil of lemon. The addition of oil of lemon is new. [*Modified.*

Opium.—Yields from 9·5 to 10·5 per cent. of anhydrous morphine when assayed by the existing process, modified as follows:—Triturate together opium in No. 50 powder and dried at 60°, 8 Gm.; calcium hydroxide, freshly prepared, 2 Gm., and water, 20 mils; when the mixture is uniform add 60 mils of water, stir occasionally during 30 minutes, and filter. Add to 51 mils of the filtrate (=opium, 5 Gm.), alcohol (90 per cent.), 5 mils, and ether, 25 mils; shake the mixture, add the ammonium chloride and proceed as usual, except that the quantities of ether used for rinsing purposes should be halved. After washing the crystals with morphinated water until the washings are free from colour, allow the filter to drain and dry it, first at 60°, and finally, for 2 hours, at 115°. Weigh the crystals, dissolve 0·2 Gm. in 10 mils of N/10 sulphuric acid and titrate back with N/10 sodium hydroxide solution, with methyl orange as indicator. Each mil of the acid neutralised by the alkaloid corresponds to 0·0285 Gm. of pure anhydrous morphine, and the weight of pure anhydrous morphine indicated, plus 0·051 Gm. (=the average loss), should amount to 0·5 Gm., representing 10 per cent. of morphine in the dry powdered opium. Limit of error, 0·5 Gm.

Opium (Powdered).—When used for official purposes other than the production of standardised preparations (extract and tincture), and preparations of the alkaloids or their salts, powdered opium containing more than 10 per cent. of anhydrous morphine must be diluted to that percentage either with powdered milk sugar or with weaker opium.

Oxymel.—Acetic acid (s.g., 1·044), 100 mils; distilled water, 100 mils; purified honey, 500 mils. Mix. S.g., 1·27. Proportion of honey reduced. [*Modified.*

Oxymel Scillæ.—Vinegar of squill, 200 mils; purified honey, 500 mils. Mix. S.g., 1·29. [*Modified.*

Oxymel Urgineæ.—Vinegar of urginea, 200 mils; purified honey, 500 mils. Mix. S.g., 1·29. [*From I.C.A.*

Pilula Aloes.—Aloes, in powder, 58 Gm.; hard soap, in powder, 29 Gm.; oil of carraway, 3 mils; syrup of glucose, 10 Gm. or q.s. Mix. This formula replaces those for Pilula Aloes Barbadensis and Pilulæ Aloes Socotrinæ. [*Modified.*

Pilula Aloes Barbadensis.—Now replaced by Pilula Aloes.

Pilula Aloes et Asafetidæ.—Aloes, in powder, 30 Gm.; asafetida, 30 Gm.; hard soap, in powder, 30 Gm.; syrup of glucose, 10 Gm. or q.s. The syrup replaces confection of roses. [*Modified.*

Pilula Aloes et Ferri.—Exsiccated ferrous sulphate, 10 Gm.; aloes, in powder, 20 Gm.; compound powder of cinnamon, 35 Gm.; syrup of glucose, 35 Gm. or q.s. Proportions of compound powder of cinnamon and syrup of glucose increased. [*Modified.*

Pilula Aloes et Myrrhæ.—Aloes, in powder, 44 Gm.; myrrh, in powder, 22 Gm.; syrup of glucose, 34 Gm. or q.s.

Pilula Aloes Socotrinæ.—Now replaced by Pilula Aloes.

Pilula Cambogiæ Composita.—Formula omitted.

Pilula Colocynthidis Composita.—Colocynth pulp, in powder, 20 Gm.; aloes, in powder, 35 Gm.; scammony resin, in powder, 35 Gm.; potassium sulphate, in powder, 5 Gm.; oil of cloves, 5 mils; distilled water, q.s. Proportions of aloes and scammony reduced. [*Modified.*

Pilula Colocynthidis et Hyoscyami.—Compound pill of colocynth, 50 Gm.; extract of hyoscyamus, 25 Gm.; distilled water, q.s. [*Modified.*

Pilula Ferri.—Exsiccated ferrous sulphate, in powder, 33 Gm.; exsiccated sodium carbonate, in powder, 21 Gm.; tragacanth, 2 Gm.; gum acacia, in powder, 8 Gm.; glucose, 31 Gm.; distilled water, 2 mils. Glucose replaces syrup and glycerin; proportions of tragacanth and gum acacia reduced. Mix the glucose, water, and ferrous sulphate, add the sodium carbonate, mix, and set aside for ten minutes, or until reaction is complete, then add the gums and mix to form a mass. Contains about 22·5 per cent. of ferrous carbonate. [*Modified.*

Pilula Galbani Composita.—Formula omitted.

Pilula Hydrargyri.—Formula unaltered, except that liquorice root is not ordered in fine powder.

Pilula Hydrargyri Subchloridi Composita.—Mercurous chloride, 20 Gm.; sulphurated antimony, 20 Gm.; guaiacum resin, in powder, 40 Gm.; gum acacia, in powder, 1 Gm.; tragacanth, in powder, 1 Gm.; syrup of glucose, 10 Gm. or q.s. Castor oil and alcohol are now omitted, while the gums and syrup are added. [*Modified.*

Pilula Ipecacuanhæ cum Scilla.—Formula unaltered.

Pilula Ipecacuanhæ cum Urginea.—Urginea, in powder, replaces squill in Pilula Ipecacuanhæ cum Scilla. [*From I.C.A.*

Pilula Phosphori.—Phosphorus, 1 Gm.; oil of theobroma, 40 Gm.; wool fat, 11 Gm.; kaolin, 16 Gm.; sodium sulphate, dried at 100°, 32 Gm.; carbon disulphide, 20 mils. Oil of theobroma and wool fat replace white beeswax and lard; sodium sulphate is an addition, and gum acacia is omitted. Dissolve the phosphorus and half the oil of theobroma in the carbon disulphide, evaporate till a pasty mass remains, add the remaining ingredients, and mix to form a mass. Contains 1 per cent. of phosphorus. [*50 p.c. weaker.*

Pilula Plumbi cum Opio.—Lead acetate, in powder, 80 Gm.; opium, in powder, 12 Gm.; syrup of glucose, 8 Gm. Mix. Contains about 12 per cent. of opium. [*Slightly weaker.*

Pilula Quininæ Sulphatis.—Quinine sulphate, 82 Gm.; tartaric acid, in powder, 3 Gm.; glycerin, 12 Gm.; tragacanth, in powder, 3 Gm. [*Slightly weaker.*

Pilula Rhei Composita.—Rhubarb, in powder, 25 Gm.; aloes, in powder, 20 Gm.; myrrh, in powder, 14 Gm.; hard soap, in powder, 14 Gm.; oil of peppermint, 2 mils; syrup of glucose, 25 Gm. or q.s. [*Modified.*

Pilula Saponis Composita.—Formula unaltered.

Pilula Scammonii Composita.—Formula omitted.

Pilula Scillæ Composita.—Proportion of hard soap reduced by one-fourth. [*Modified.*

Pilula Urgineæ Composita.—Urginea, in powder, replaces the squill in Pilula Scillæ Composita. [*From I.C.A.*

Podophylli Indici Resina.—Prepared from Indian podophyllum rhizome by the same process used in the preparation of Podophylli Resina. Dose: 16 to 60 milligrams (¼ to 1 grain).

Podophylli Resina.—Process unaltered, except that resin is to be dried at a temperature not exceeding 40°.

Potassa Sulphurata.—Process unaltered. Product contains from 42 to 45 per cent. of sulphur, determined as follows:—Dissolve 0·2 Gm. in water, 10 mils, add sodium hydroxide solution, 5 mils, and heat to boiling; then add slowly until a clear solution is obtained and bromine is present in excess, the flask being constantly rotated, solution of bromine AsT., prepared by dissolving 30 Gm. each of bromine and potassium bromide in sufficient distilled water to produce 100 mils, and containing not more than 1 in 1,000,000 of arsenic. Next acidify with hydrochloric acid, boil until excess of bromine is driven off, add excess of barium chloride, and collect, wash, dry, ignite, and weigh the precipitate formed. The weight of precipitate should be from 0·611 to 0·655 Gm.

Pulvis Amygdalæ Composita.—Sweet almonds, 60 Gm.; refined sugar, in powder, 30 Gm.; gum acacia, in powder, 10 Gm. Proportion of gum acacia increased. [*Modified.*

Pulvis Antimonialis.—Formula unaltered.

Pulvis Buteæ Seminum.—Butea seeds are soaked in water till the integuments can be removed, after which the kernels are dried and powdered. Dose: 6 to 12 decigrams (10 to 20 grains). [*From I.C.A.*

Pulvis Catechu Compositus.—Formula unaltered.

Pulvis Cinnamomi Compositus.—Formula unaltered.

Pulvis Cretæ Aromaticus.—Cinnamon bark, in powder, 10 Gm.; nutmeg, in powder, 8 Gm.; cloves, in powder, 4 Gm.; cardamom seeds, in powder, 3 Gm.; refined sugar, in powder, 50 Gm.; prepared chalk, 25 Gm. Proportions of cinnamon bark, sugar, and chalk reduced, and proportion of cardamom seeds increased. [*Modified.*

Pulvis Cretæ Aromaticus cum Opio.—Formula unaltered.

Pulvis Elaterini Compositus.—Formula omitted.

Pulvis Glycyrrhizæ Compositus.—Senna leaves, in powder, 16 Gm.; liquorice root, in powder, 16 Gm.; fennel fruit, in powder, 8 Gm.; sublimed sulphur, 8 Gm.; refined sugar, in powder, 52 Gm. Proportion of sugar increased. [*Modified.*

Pulvis Ipecacuanhæ Compositus.—Formula unaltered, but the powdered ipecacuanha root should now contain 2 per cent. of alkaloids.

Pulvis Jalapæ Compositus.—Jalap, in powder, 30 Gm.; acid potassium tartrate, in powder, 60 Gm.; ginger, in powder, 10 Gm. Proportion of jalap decreased and that of ginger increased. [*Modified.*

Pulvis Kaladanæ Compositus.—Kaladana replaces the jalap in Pulvis Jalapæ Compositus. Dose 6 to 40 decigrams (10 to 60 grains). [*From I.C.A.*

Pulvis Kino Compositus.—Formula unaltered.

Pulvis Opii Compositus.—Opium, in powder, 10 Gm.; black pepper of commerce, 15 Gm.; ginger, in powder, 30 Gm.; caraway fruit, in powder, 42 Gm.; tragacanth, in powder, 3 Gm. Proportions of ginger and tragacanth decreased, and those of black pepper and caraway fruit increased. [*Modified.*

Pulvis Rhei Compositus.—Rhubarb root, in powder, 22 Gm.; light magnesia, 66 Gm.; ginger, in powder, 12 Gm. Proportion of ginger increased. Heavy magnesia may not now be employed if a less bulky powder be desired. [*Modified.*

Pulvis Scammoniæ Compositus.—Scammony resin, in powder, 50 Gm.; jalap, in powder, 35 Gm.; ginger, in powder, 15 Gm. Proportion of jalap decreased, and that of ginger increased. [*Modified.*

Pulvis Sodæ Tartaratæ Effervescens.—No. 1 (in blue paper), sodium potassium tartrate, in dry powder, 7·5 Gm.; sodium bicarbonate, in dry powder, 2·5 Gm. No. 2 (in white paper). Tartaric acid, in dry powder, 2·5 Gm. Proportions of sodium potassium tartrate and sodium bicarbonate slightly reduced; proportion of tartaric acid slightly increased. [*Modified.*

Pulvis Tragacanthæ Compositus.—Tragacanth, in powder, 15 Gm.; gum acacia, in powder, 20 Gm.; starch, in powder, 20 Gm.; refined sugar, in powder, 45 Gm. Proportions of gum acacia and starch increased by one-third. [*Modified.*

Pyroxylinum.—Formula and process unaltered.

Scammoniæ Resina.—Process the same as that for Jalapæ Resina. Not less than 75 per cent. soluble in ether (s.g., 0·720). Dose: 25 to 50 centigrams (4 to 8 grains).

Sevum Benzoatum.—Prepared suet, 1,000 Gm.; benzoin, in coarse powder, 30 Gm. Add the benzoin to the previously melted suet, maintain at a temperature of 60° for one hour, with frequent stirring; then strain and stir until nearly cold. [*From I.C.A.*

Sodii Citro-Tartras Effervescens.—Formula and process unaltered.

Sodii Phosphas Effervescens.—Formula and process unaltered.

Sodii Sulphas Effervescens.—Formula and process unaltered.

Spiritus Ætheris.—Formula unaltered, but ether of s.g. 0·720 is used. S.g., 0·802 to 0·806. [*Modified.*

Spiritus Ætheris Compositus.—Formula omitted.

Spiritus Ætheris Nitrosi.—Formula and process unaltered. Contains from 1·52 to 2·66 per cent. of ethyl nitrite. Dose: 1 to 4 mils (15 to 60 minims).

Spiritus Ammoniæ Aromaticus.—Formula unaltered, except that quantity of oil of nutmeg is increased from 14·1 mils to 15 mils, and that of oil of lemon reduced from 20·3 mils to 20 mils. Tests amplified. [*Modified.*

Spiritus Ammoniæ Fetidus.—Formula and process unaltered. S.g., 0·842 to 0·850.

Spiritus Anisi.—Formula unaltered. Where this, or other spirit, is not clear, shake with a little powdered talc and filter.

Spiritus Armoraciæ Compositus.—Formula unaltered, except that quantity of nutmeg is reduced from 3·15 Gm. to 3 Gm. Macerate the horseradish root in the distilled water for one hour, before adding the other ingredients and distilling. S.g., 0·917 to 0·927. [*Modified.*

Spiritus Cajuputi.—Formula unaltered.

Spiritus Camphoræ.—Formula unaltered. S.g., 0·845 to 0·850. Optical rotation at 15·5° not less than + 4°.

Spiritus Chloroformi.—Formula unaltered.

Spiritus Cinnamomi.—Formula unaltered.

Spiritus Juniperi.—Oil of juniper, 100 mils; alcohol (90 per cent.), to 1,000 mils. Dissolve. Dose: 3 to 12 decimils (5 to 20 minims). [*100 p.c. stronger.*

Spiritus Lavandulæ.—Formula unaltered.

Spiritus Menthæ Piperitæ.—Formula unaltered.

Spiritus Myristicæ.—Formula unaltered.

Spiritus Rectificatus.—Now contains 85·68 per cent. of ethyl hydroxide. S.g., 0·8337. Dilute 777·8 mils with distilled water to 1,000 mils at 15·5° for 70 per cent. alcohol (s.g., 0·8899), or 666·7 mils to 1,000 mils for 60 per cent. alcohol (s.g., 0·9134), or 500 mils to 1,000 mils for 45 per cent. alcohol (s.g., 0·9435), or 222·2 mils to 1,000 mils for 20 per cent. alcohol (s.g., 0·9760).

Spiritus Rosmarini.—Formula unaltered.

Spiritus Vini Gallici.—Now omitted.

Styrax Præparatus.—Yields not less than 20 per cent. of cinnamic acid when assayed as follows:—Dissolve 2·5 Gm. in 25 mils of N/2 alcoholic potassium hydroxide solution, boil for one hour under reflux condenser, neutralise with N/2 sulphuric acid, remove the alcohol by evaporation, and dissolve the residue in 50 mils of water. Shake out with 20 mils of ether, wash the separated ethereal layer with 5 mils of water, add the washings to the aqueous solution, acidify the mixture with diluted sulphuric acid, and shake with four successive 20 mils of ether. Wash the mixed ethereal solutions with a few mils of water, distil off the ether, add to the residue 100 mils of water, boil vigorously for 15 minutes under a reflux condenser, filter while hot, cool to 15·5°, and collect the separated crystals of cinnamic acid on a tared filter. Repeat the extraction of the residue with the filtrate at least three times, until no more cinnamic acid is removed, dry the filter paper and crystals in a desiccator, and weigh. The weight of the crystals, plus 0·03 Gm. (representing average amount of acid remaining in the aqueous liquid), should be not less than 0·5 Gm.

Succus Belladonnæ.—Now omitted.

Succus Conii.—Now omitted.

Succus Hyoscyami.—Now omitted.

Succus Limonis.—Strength unaltered, but volumetric test given for citric acid present.

Succus Scoparii.—Formula and process unaltered.

Succus Taraxaci.—Formula and process unaltered.

Suppositoria Acidi Carbolici.—Phenol, 0·8 Gm.; white beeswax, 0·5 Gm. Dissolve the phenol in the melted oil of theobroma before adding the white beeswax. [*Modified.*

Suppositoria Acidi Tannici.—Formula and process unaltered.

Suppositoria Belladonnæ.—Liquid extract of belladonna, 1·7 mils; oil of theobroma, q.s. for twelve suppositories each weighing about 1 Gm. Evaporate the extract to a syrupy consistence, and mix with the previously melted oil of theobroma. Strength unaltered. [*Modified.*

Suppositoria Glycerini.—Gelatin, cut small, 14 Gm.; glycerin, 70 Gm.; distilled water, q.s. Thoroughly soften the gelatin by soaking in the water for five minutes or longer, drain well, add the glycerin, heat on a water-bath until the mixture is complete, and evaporate to 100 Gm. [*Modified.*

Suppositoria Iodoformi.—Formula and process unaltered.

Suppositoria Morphinæ.—Formula and process unaltered.

Suppositoria Plumbi Composita.—Formula and process unaltered.

Syrupus.—Formula unaltered, but cold distilled water is added to make up required weight of syrup. Optical rotation +56° to +58°. [*Modified.*

Syrupus Acidi Hydriodici.—Diluted hydriodic acid (10 per cent.), 100 Gm.; distilled water, 50 mils; syrup, to 1,000 mils. Dose: 2 to 4 mils ($\frac{1}{2}$ to 1 fl. drachm). [*New.*

Syrupus Aromaticus.—Formula unaltered.

Syrupus Aurantii.—Tincture of orange, 125 mils; syrup, to 1,000 mils.

Syrupus Aurantii Floris.—Orange-flower water of commerce, undiluted, 150 mils; refined sugar, 300 Gm.; syrup, to 1,000 mils. Mix the water with the sugar in a closed vessel, and stand in a moderately warm place, shaking occasionally till dissolved; then add the syrup. [*Modified.*

Syrupus Calcii Lactophosphatis.—Calcium lactate, 75 Gm.; concentrated phosphoric acid, 45 mils; orange-flower water of commerce, undiluted, 25 mils; refined sugar, 700 Gm.; distilled water, to 1,000 mils. Mix the calcium lactate with 400 mils of the distilled water, add the acid, and stir till solution is complete; then add the orange-flower water, dissolve the sugar in the mixture without heating, and make up to the required volume with distilled water. [*Modified.*

Syrupus Cascaræ Aromaticus.—Formula unaltered, except that syrup is added to make the product, with 400 mils of the liquid extract, measure 1,000 mils.

Syrupus Chloral.—Chloral hydrate, 200 Gm.; distilled water, 200 mils; syrup, to 1,000 mils. Contains 20 per cent. w/v of chloral hydrate. [*9 p.c. stronger.*

Syrupus Codeinæ.—Now known as Syrupus Codeinæ Phosphatis.

Syrupus Codeinæ Phosphatis.—Codeine phosphate, 5 Gm.; distilled water, 15 mils; syrup, to 1,000 mils. Contains 0·5 per cent. w/v of codeine phosphate. [*9 p.c. stronger.*

Syrupus Ferri Iodidi.—Iron, in wire, 15 Gm.; iodine, 41·4 Gm.; distilled water, 75 mils; glucose, 100 Gm.; syrup, to 1,000 Gm. Place 50 mils of the water in a flask, add the iron and iodine, shake occasionally (cooling if necessary) till the reaction is completed; then add the glucose, heat on a water-bath for five minutes, mix and filter, while hot, into a tared vessel containing part of the syrup; rinse the flask and wash the filter-paper with the remainder of the water, heated to boiling, and add sufficient syrup to produce the required weight. S.g., not now stated. Contains from 4·9 to 5·1 per cent. of ferrous iodide, determined as follows:—Dilute 5 Gm. with 20 mils of water, acidify with nitric acid, and mix with 20 mils of N/10 silver nitrate solution; not less than 3·5 mils or more than 4·2 mils of N/10 ammonium thiocyanate solution should be required to produce a permanent red coloration, with ferric sulphate as indicator. *[30 p.c. weaker.*

Syrupus Ferri Phosphatis.—Formula unaltered. Contains 1·8 per cent. w/v of anhydrous ferrous phosphate.

Syrupus Ferri Phosphatis cum Quinina et Strychnina.—Formula unaltered, but the solution of iron in concentrated phosphoric acid is to be added to the strychnine, 0·57 Gm., and quinine sulphate, 14·8 Gm., previously triturated with 30 mils of the distilled water; when solution is complete, proceed as usual. Contains 1·8 per cent. w/v of anhydrous ferrous phosphate, 1·48 p.c. of quinine sulphate, and 0·057 per cent. of strychnine.

Syrupus Glucosi.—Formula unaltered.

Syrupus Hemidesmi.—Formula omitted.

Syrupus Limonis.—Formula unaltered.

Syrupus Pruni Virginianæ.—Formula unaltered, except that the proportion of glycerin is now increased to 65 mils in 1,000 mils. *[Modified.*

Syrupus Rhei.—Rhubarb root, in No. 20 powder, 70 Gm.; oil of coriander, 0·5 mil; refined sugar, 840 Gm.; alcohol (90 per cent.), 280 mils; distilled water, to 1,000 mils. Mix 270 mils of the alcohol with 810 mils of distilled water, moisten the rhubarb with 70 mils of the mixture, set aside in a closed vessel for 24 hours, then pack in a percolator and pass the remainder of the diluted alcohol slowly through the drug; evaporate the percolate to 475 Gm., filter, dissolve the sugar in the filtrate by the aid of heat, cool, add the oil of coriander dissolved in 10 mils of the alcohol, mix, and make up to the required volume with distilled water. Oil of coriander replaces coriander fruit. *[Modified.*

Syrupus Rhœados.—Formula unaltered, except that the product is now made up to 1,000 mils instead of 1,160 Gm.

Syrupus Rosæ.—Dried red-rose petals, 50 Gm.; refined sugar, q.s.; distilled water, boiling, 500 mils. Infuse the petals in the water for two hours, strain, press, heat the infusion to boiling point, and filter; add to the filtrate twice its weight of sugar, and dissolve by the aid of heat. Proportion of sugar slightly increased. [*Modified.*

Syrupus Scillæ.—Vinegar of squill, 175 mils; refined sugar, 650 Gm.; distilled water, to 1,000 Gm. Mix the vinegar of squill with an equal volume of the water, dissolve the sugar in the mixture by the aid of heat, and add sufficient water to produce the required weight. [*Modified.*

Syrupus Sennæ.—Senna leaves, 440 Gm.; oil of coriander, 0·2 mil; alcohol (90 per cent.), 2 mils; refined sugar, 540 Gm.; alcohol (20 per cent.), 760 mils; distilled water, q.s. Process unaltered, but moisten the senna with 440 mils of the weak alcohol, and the marc first with 160 mils and then with the remainder. The evaporated and reserved liquids, when mixed, should measure 440 mils, and distilled water is to be passed through the filter until the filtrate measure 440 mils. Neither weight nor volume is now specified for the finished product. [*Modified.*

Syrupus Tolutanus.—Balsam of tolu, 25 Gm.; refined sugar, 660 Gm.; distilled water, to 1,000 Gm. Proportion of sugar slightly increased. Add 400 Gm. of the water, boiling, to the balsam, cover lightly and heat on a water-bath for half an hour, stirring frequently; then add cold distilled water, if necessary, to make the liquid measure 400 mils; when cold, filter, add the sugar, dissolve by the heat of a water-bath, and add sufficient water to produce 1,000 Gm. [*Modified.*

Syrupus Urgineæ.—Vinegar of urginea, 175 mils; refined sugar, 650 Gm.; distilled water, to 1,000 mils. Proceed as in the case of Syrupus Scillæ. Dose: 2 to 4 mils (½ to 1 fl. drachm). [*From I.C.A.*

Syrupus Zingiberis.—Formula and process unaltered.

Tabellæ Trinitrini.—Each weighs 0·3 Gm., and contains 0·0005 Gm. (about 1/130 grain) of trinitro-glycerin, instead of 0·00065 Gm. [*23 p.c. weaker.*

Thyroideum Siccum.—Dry the minced glands at a temperature of 30° to 40°. Dose reduced to 3 to 25 centigrams (½ to 4 grains).

Tinctura Aconiti.—Aconite root, in No. 40 powder, 150 Gm., is moistened with alcohol (70 per cent.), 75 mils, and the drug percolated with sufficient of the alcohol to produce 1,000 mils of a strong tincture. The proportion of ether-soluble alkaloids present in 100 mils is then determined by the process described under Aconiti Radix, and the strong tincture diluted with alcohol (70 per cent.), so that the product contains 0·04 per cent. w/v of ether-soluble alkaloids of aconite root. The tincture is also assayed by the foregoing process. Limit of error, 0·002 Gm. *[100 p.c. stronger.*

Tinctura Aloes.—Formula omitted.

Tinctura Alstoniæ.—Alstonia, in No. 20 powder, 125 Gm.; alcohol (60 per cent.), 1,000 mils. Maceration process. Dose: 2 to 4 mils (½ to 1 fl. drachm). *[From I.C.A.*

Tinctura Arnicæ.—Formula omitted.

Tinctura Arnicæ Florum.—Arnica flowers, in No. 20 powder, 100 Gm.; alcohol (45 per cent.), to 1,000 mils. Moisten the drug with 200 mils of the alcohol, and complete the percolation process, which is now slightly modified, the moistened materials being set aside for four hours, then packed in a percolator and macerated for twenty-four hours in sufficient of the menstruum to saturate them, before percolation is allowed to proceed. The product is clarified by subsidence or filtration if necessary. *[From I.C.A.*

Tinctura Asafetidæ.—Formula and process unaltered.

Tinctura Aurantii.—Formula and process unaltered.

Tinctura Belladonnæ.—Belladonna leaves, dried and in No. 20 powder, 100 Gm.; alcohol (70 per cent.), to 1,000 mils. Moisten the drug with 100 mils of the alcohol, and complete the percolation process; then standardise by the following process:—Reduce 100 mils to about one-tenth by evaporation, add alcohol (90 per cent.) if necessary to dissolve any separated substance, and transfer to a separator, rinsing the evaporating dish with a little water. Then add 10 mils of water, 20 mils of chloroform, and 2 mils of solution of ammonia; shake well, separate the chloroformic layer, repeat the extraction with two successive 10 mils of chloroform, mix the chloroformic solutions, shake with 10 mils of N/1 sulphuric acid diluted with twice its volume of water, separate the chloroformic solution, repeat the shaking with 10 mils of the acid and water, mix the acid solutions, shake well with 20 mils of chloroform and 4 mils of solution of ammonia, draw off the chloroformic solution into a beaker, and repeat the extraction with two further 10 mils of chloroform. Evaporate the mixed chloroformic solutions, dry the residue on a water bath for thirty minutes, then dissolve it in 10 mils of N/20 sulphuric acid and titrate with N/20 sodium hydroxide solution, with tincture of cochineal as indicator. Finally deduct from 10 the number of mils of alkaline solution required, and multiply the difference by 0·01446 to ascertain the weight of the alkaloids in 100 mils of the tincture. This weight should not be less than 0·035 Gm.; if more, the tincture must be diluted with alcohol (70 per cent.), q.s. The tincture is also assayed by the foregoing process. Limit of error, 0·002 Gm. [*30 p.c. weaker.*

Tinctura Benzoini Composita.—Formula unaltered, except that "aloes" replaces "Socotrine aloes," and the proportion thereof is increased to 20 Gm. in 1,000 mils. [*Modified.*

Tinctura Berberidis.—Berberis, in No. 60 powder, 100 Gm.; alcohol (60 per cent.), to 1,000 mils. Moisten the drug with 100 mils of the alcohol and complete the percolation process. Dose: 2 to 4 mils (½ to 1 fl. drachm). [*From I.C.A.*

Tinctura Buchu.—Formula unaltered. Percolation process.

Tinctura Calumbæ.—Formula and process unaltered.

Tinctura Camphoræ Composita.—Tincture of opium, 50 mils; benzoic acid, 5 Gm.; camphor, 3 Gm.; oil of anise, 3 mils; alcohol (60 per cent.), to 1,000 mils. Contains 0·05 per cent. w/v of morphine. [*10 p.c. stronger.*

Tinctura Cannabis Indicæ.—Formula unaltered, but direction to "filter if necessary" omitted.

Tinctura Cantharidis.—Formula omitted.

Tinctura Cantharidini.—Cantharidin, 0·1 Gm.; chloroform, 10 mils; alcohol (90 per cent.), to 1,000 mils. Dissolve the cantharidin in the chloroform, and add the alcohol. Contains 20 per cent. less chloroform than B.P.C. tincture. Dose: 12 to 30 centimils (2 to 5 minims). [*New.*

Tinctura Capsici.—Formula unaltered, except that alcohol (60 per cent.) is now used. Maceration process. [*Modified.*

Tinctura Cardamomi Composita.—Cardamom seeds, in No. 20 powder, 14 Gm.; caraway fruit, in No. 20 powder, 14 Gm.; cinnamon bark, in No. 20 powder, 28 Gm.; cochineal, in No. 20 powder, 7 Gm.; glycerin, 100 mils; alcohol (45 per cent.), to 1,000 mils. Glycerin replaces raisins. Proportions of the other solids are increased, and weaker alcohol is used. Moisten the mixed powders with 50 mils of the alcohol and prepare, by the percolation process, 850 mils of tincture; then add the glycerin and sufficient alcohol to produce the required volume. [*Modified.*

Tinctura Cascarillæ.—Formula unaltered. Percolation process.

Tinctura Catechu.—Formula unaltered, except that alcohol (45 per cent.) is now used. Maceration process. [*Modified.*

Tinctura Chiratæ.—Formula unaltered. Percolation process.

Tinctura Chloroformi et Morphinæ.—Formula unaltered, except that the quantity of oil of peppermint is increased to 2 mils in 1,000 mils. [*Modified.*

Tinctura Cimicifugæ.—Formula omitted.

Tinctura Cinchonæ.—Formula and strength unaltered, but the moistened powder is set aside for seven days before percolating. Standardise by the process described under Extractum Cinchonæ Liquidum, determining the weight of alkaloids in 10 mils of strong tincture, before adding alcohol (70 per cent.), q.s. Contains 1 per cent. w/v of the alkaloids of red cinchona bark. The tincture is also assayed by the foregoing process. Limit of error, 0·05 Gm.

Tinctura Cinchonæ Composita.—Saffron is now omitted, and the quantity of cochineal, in powder, reduced from 3·2 to 3 Gm. in 1,000 mils. Contains 0·5 per cent. w/v of the alkaloids of red cinchona bark. Assayed by the process described under Extractum Cinchonæ Liquidum. Limit of error, 0·05 Gm. [*Modified.*

Tinctura Cinnamomi.—Formula unaltered. Percolation process.

Tinctura Cocci.—Formula and process unaltered.

Tinctura Colchici.—Formerly named Tinctura Colchici Seminum. Colchicum seeds, in No. 30 powder, 100 Gm.; alcohol (70 per cent.), to 1,000 mils. Moisten the drug with 50 mils of the alcohol and then complete the percolation process. [*50 p.c. weaker.*

Tinctura Colchici Seminum.—Now known as Tinctura Colchici, and strength reduced to one-half.

Tinctura Conii.—Formula omitted.

Tinctura Croci.—Formula omitted.

Tinctura Cubebæ.—Cubebs now in No. 20 powder. Percolation process.

Tinctura Daturæ Seminum.—Datura seeds, in No. 20 powder, 250 Gm.; alcohol (70 per cent.), to 1,000 mils. Moisten the drug with 200 mils of alcohol and then complete the percolation process. Dose: 3 to 10 decimils (5 to 15 minims). [*From I.C.A.*

Tinctura Digitalis.—Digitalis leaves, in No. 20 powder, 100 Gm.; alcohol (70 per cent.), to 1,000 mils. Percolation process. [*20 p.c. weaker.*

Tinctura Ergotæ Ammoniata.—Formula unaltered. Percolation process.

Tinctura Ferri Perchloridi.—Formula unaltered.

Tinctura Gelsemii.—Formula unaltered. Percolation process.

Tinctura Gentianæ Composita.—Formula unaltered, except that cardamom seeds are now in powder. Maceration process.

Tinctura Guaiaci Ammoniata.—Oil of nutmeg is now reduced to 3 mils and oil of lemon to 2 mils in 1,000 mils, while the strong solution of ammonia is first mixed with only 700 mils of the alcohol. [*Modified.*

Tinctura Hamamelidis.—Formula unaltered. Percolation process.

Tinctura Hydrastis.—Liquid extract of hydrastis, 100 mils; alcohol (60 per cent.), to 1,000 mils. Mix. The liquid extract replaces hydrastis rhizome. [*Modified.*

Tinctura Hyoscyami.—Hyoscyamus leaves, in No. 20 powder, 100 Gm.; alcohol (70 per cent.), to 1,000 mils. Percolation process. Leaves only are now used, and strength of alcohol is increased. [*Modified.*

Tinctura Iodi.—Now known as Tinctura Iodi Mitis.

Tinctura Iodi Fortis.—Formerly named Liquor Iodi Fortis, and now slightly reduced in strength. Iodine, 100 Gm.; potassium iodide, 60 Gm.; distilled water, 100 mils; alcohol (90 per cent.), to 1,000 mils. Dissolve the potassium iodide and the iodine in the water, and then add the alcohol. Contains 10 per cent. w/v of iodine. [*Modified.*

Tinctura Iodi Mitis.—Formerly known as Tinctura Iodi. Formula and dose unaltered. Contains 2·5 per cent. w/v of iodine.

Tinctura Jaborandi.—Formula omitted.

Tinctura Jalapæ.—Formula and process unaltered.

Tinctura Jalapæ Composita.—Jalap, in No. 40 powder, 80 Gm.; scammony resin, in powder, 15 Gm.; turpeth, in No. 40 powder, 10 Gm.; alcohol (60 per cent.), to 1,000 mils. Moisten the mixed powders with 100 mils of the alcohol, and complete the percolation process. Dose: 2 to 4 mils (½ to 1 fl. drachm). [*From I.C.A.*

Tinctura Kaladanæ.—Kaladana, in No. 40 powder, 200 Gm.; alcohol (70 per cent.), to 1,000 mils. Moisten drug with 100 mils of the alcohol, and complete the percolation process. Dose: 2 to 4 mils (½ to 1 fl. drachm). [*From I.C.A.*

Tinctura Kino.—Formula and process unaltered.

Tinctura Krameriæ.—Formula unaltered. Percolation process.

Tinctura Lavandulæ Composita.—Oil of lavender, 5 mils; oil of rosemary, 0·5 mil; cinnamon bark, bruised, 10 Gm.; nutmeg, bruised, 10 Gm.; red sanders wood, rasped, 20 Gm.; alcohol (90 per cent.), to 1,000 mils. Proportions of oil of lavender, cinnamon bark, nutmeg, and red sanders wood increased. Macerate the solids and oils with 900 mils of the alcohol for seven days, shaking occasionally; then filter and pass sufficient alcohol through the filter to make up to 1,000 mils. [*Modified.*

Tinctura Limonis.—Formula and process unaltered.

Tinctura Lobeliæ Ætherea.—Formula unaltered. Percolation process.

Tinctura Lupuli.—Formula omitted.

Tinctura Myrrhæ.—Formula and procees unaltered.

Tinctura Nucis Vomicæ.—Liquid extract of nux vomica, 50 mils; distilled water, 150 mils; alcohol (90 per cent.), to 600 mils. Mix and filter if necessary. Contains 0·125 per cent. w/v of strychnine. [*50 p.c. weaker.*

Tinctura Oliveri Corticis.—Oliver's bark, in No. 40 powder, 100 Gm.; alcohol (60 per cent.), to 1,000 mils. Moisten the drug with 50 mils of the alcohol and then complete the percolation process. Dose: 2 to 4 mils (½ to 1 fl. drachm). [*From I.C.A.*

Tinctura Opii.—Opium, 200 Gm., is rubbed to a paste with 500 mils of distilled water at 90°, the mixture set aside for six hours, and 500 mils of alcohol (90 per cent.) added. Standardise by the existing process, modified as follows:—Evaporate 40 mils of the strong tincture to about 10 mils, mix the residual liquid with 1 Gm. of freshly slaked lime, dilute the mixture with water to 41 mils, set aside for thirty minutes, stirring from time to time, filter off 25 mils of the liquid (representing 25 mils of the strong tincture), and proceed as usual, except that the quantities of alcohol, ether, and ammonium chloride should be halved. After washing the crystals with morphinated water until the washings are free from colour, allow the filter to drain and dry it, first at 60°, and finally, for two hours, at 115°. Weigh the crystals, and titrate 0·2 Gm. with N/10 sulphuric acid, as directed under Opium. Add to the weight of morphine indicated 0·025 Gm. (= the average loss), and, having thus ascertained the quantity of morphine in 25 mils. of the strong tincture, dilute the remainder of the tincture with sufficient alcohol (90 per cent.) and distilled water, in equal volumes, to produce a tincture containing 1 per cent. w/v of morphine. The tincture may also be assayed by the foregoing process. Limit of error, 0·05 Gm. [*33·3 p.c. stronger.*

Tinctura Opii Ammoniata.—Tincture of opium, 100 mils; benzoic acid, 20 Gm.; oil of anise, 5 mils; solution of ammonia, 200 mils; alcohol (90 per cent.), to 1,000 mils. Proportions of tincture of opium, benzoic acid, and oil of anise reduced. Contains 0·1 per cent. w/v of morphine, calculated as anhydrous. [*10 p.c. weaker.*

Tinctura Picrorhizæ.—Picrorhiza, cut small and bruised, 250 Gm.; alcohol (45 per cent.), to 1,000 mils. Maceration process. Dose: 2 to 4 mils (½ to 1 fl. drachm). [*From I.C.A.*

Tinctura Podophylli.—Formula and process unaltered.

Tinctura Podophylli Indici.—Indian podophyllum resin, 36·5 Gm.; alcohol (90 per cent.), to 1,000 mils. Process same as that for Tinctura Podophylli. Dose: 3 to 10 decimils (5 to 15 minims). [*From I.C.A.*

Tinctura Pruni Virginianæ.—Wild cherry bark, in No. 20 powder, 200 Gm.; alcohol (90 per cent.), 565 mils; distilled water, 365 mils; glycerin, 100 mils. Process unaltered, except that the glycerin is added after the maceration is completed. Proportions of alcohol and water reduced, and glycerin added. [*Modified.*

Tinctura Pyrethri.—Formula unaltered. Percolation process.

Tinctura Quassiæ.—Formula and process unaltered.

Tinctura Quillaiæ.—Formula unaltered. Percolation process.

Tinctura Quininæ.—Formula and process unaltered.

Tinctura Quininæ Ammoniata.—Formula and process unaltered.

Tinctura Rhei Composita.—Cardamom seeds and coriander fruit are now in No. 20 powder, and alcohol (45 per cent.) is used as menstruum. In preparing 1,000 mils, when the percolate measures 850 mils add the glycerin and alcohol (45 per cent.), q.s. to produce 1,000 mils. [*Modified.*

Tinctura Scillæ.—Formula and process unaltered.

Tinctura Senegæ.—Formula unaltered. Percolation process.

Tinctura Sennæ Composita.—Senna leaves, caraway and coriander fruits are now in No. 20 powder, and the raisins are replaced by glycerin, 100 mils in 1,000 mils. Moisten the solids with 250 mils of alcohol, and prepare, by percolation process, 850 mils of tincture; then add the glycerin and alcohol, q.s. to produce 1,000 mils. [*Modified.*

Tinctura Serpentariæ.—Alcohol (60 per cent.) is now used. Percolation process. [*Modified.*

Tinctura Stramonii.—Formula unaltered. Percolation process.

Tinctura Strophanthi.—Strophanthus seeds, in No. 30 powder and dried at 45°, 100 Gm.; ether, q.s.; alcohol (70 per cent.), to 1,000 mils. Pack the powder in a percolator, moisten with ether, and macerate for twenty-four hours; then percolate with ether till it passes colourless, dry the marc (gradually heating it to 50°), powder, again pack in percolator, moisten with alcohol, and macerate for forty-eight hours. Finally, pour on successive quantities of alcohol, percolate slowly till the percolate measures 500 mils; then add alcohol q.s. to make 1,000 mils. Proportion of strophanthus seeds very largely increased, and ether now used to remove fat and resins. [*300 p.c. stronger.*

Tinctura Sumbul.—Formula omitted.

Tinctura Tolutana.—Formula and process unaltered.

Tinctura Urgineæ.—Urginea, bruised, 200 Gm.; alcohol (60 per cent.), 1,000 mils. Maceration process. Dose: 3 to 10 decimils (5 to 15 minims). [*From I.C.A.*

Tinctura Valerianæ Ammoniata.—Oil of nutmeg reduced from 3·1 to 3 mils, and oil of lemon from 2·1 to 2 mils in (approximately) 1,000 mils. Process unaltered. [*Modified.*

Tinctura Valerianæ Indici Ammoniata.—Formula and process as for Tinctura Valerianæ Ammoniata, except that the valerian rhizome is replaced by Indian valerian rhizome. Dose: 2 to 4 mils (½ to 1 fl. drachm). [*From I.C.A.*

Tinctura Zingiberis.—Formula unaltered. Percolation process.

Trochisci.—Formulæ for lozenge bases are modified, thus:—For *Fruit basis* mix 500 times the quantity of drug ordered for a single lozenge with 6·5 Gm. of tragacanth and 26 Gm. of refined sugar, both in fine powder, add black-currant paste, q.s. to make 650 Gm., beat into a uniform mass, divide into 500 equal lozenges, and dry in a hot-air chamber at a moderate temperature; for *Simple basis* use refined sugar, 496 Gm.; gum acacia, 19·5 Gm.; and mucilage of acacia, 35 mils; for *Rose basis* proceed as in the case of simple basis, but previously mix with the sugar oil of rose, 0·025 mil; for *Tolu basis* dissolve such salts of alkaloids as may be ordered in distilled water, 10 mils, and use refined sugar, 482 Gm.; gum acacia, 19·5 Gm.; tincture of tolu, 10 mils; and mucilage of acacia, 35·5 mils. Processes otherwise unaltered.

Trochiscus Acidi Benzoici.—Benzoic acid, 0·03 Gm., with fruit basis, q.s.

Trochiscus Acidi Carbolici.—Phenol, in powder, 15 Gm.; refined sugar, in powder, 500 Gm.; gum acacia, in powder, 45 Gm.; tragacanth, in powder, 15 Gm.; lemon juice, 45 mils. Mix and divide into 500 lozenges and dry. Each lozenge contains 0·03 Gm. of phenol. Formerly made with tolu basis. [*50 p.c. weaker.*

Trochiscus Acidi Tannici.—Tannic acid, 0·03 Gm., with tolu basis, q.s. Formerly made with fruit basis. [*Modified.*

Trochiscus Bismuthi Compositus.—Bismuth oxycarbonate, 0·15 Gm.; heavy magnesium carbonate, 0·15 Gm.; precipitated calcium carbonate, 0·3 Gm., with rose basis, q.s.

Trochiscus Catechu.—Catechu, 0·06 Gm., with fruit basis, q.s. Formerly made with simple basis. [*Modified.*

Trochisci Eucalypti Gummi.—Now known as Trochiscus Kino Eucalypti.

Trochiscus Ferri Redacti.—Reduced iron, 0·06 Gm., with simple basis, q.s.

Trochiscus Guaiaci Resinæ.—Guaiacum resin, 0·2 Gm., with fruit basis, q.s.

Trochiscus Ipecacuanhæ.—Ipecacuanha root, in powder, 0·015 Gm., with simple basis, q.s. Formerly made with fruit basis. [*Modified.*

Trochiscus Kino Eucalypti.—Eucalyptus kino, 0·06 Gm., with fruit basis, q.s.

Trochiscus Krameriæ.—Extract of krameria, 0·06 Gm., with fruit basis, q.s.

Trochiscus Krameriæ et Cocainæ.—Extract of krameria, 0·06 Gm.; cocaine hydrochloride, 0·003 Gm., with fruit basis, q.s.

Trochiscus Morphinæ.—Morphine hydrochloride, 0·002 Gm., with tolu basis, q.s.

Trochiscus Morphinæ et Ipecacuanhæ.—Morphine hydrochloride, 0·002 Gm.; ipecacuanha root, in powder, 0·006 Gm., with tolu basis, q.s.

Trochiscus Potassii Chloratis.—Potassium chlorate, 0·2 Gm., with rose basis.

Trochiscus Santonini.—Santonin, 0·06 Gm., with simple basis.

Trochiscus Sodii Bicarbonatis.—Formula omitted.

Trochiscus Sulphuris.—Precipitated sulphur, 150 Gm.; acid potassium tartrate, in powder, 30 Gm.; refined sugar, in powder, 275 Gm.; gum acacia, in powder, 30 Gm.; tincture of orange, 30 mils; mucilage of gum acacia, 30 mils. Mix the tincture with the powders, add the mucilage to form a suitable mass, divide into 500 lozenges and dry. Each lozenge contains 0·3 Gm. of sulphur. [*Modified.*

Unguentum Acid Borici.—Boric acid, in powder, 10 Gm.; paraffin ointment, white, 90 Gm. Melt the ointment, sift in the powder, and stir till cold.

Unguentum Acidi Carbolici.—Phenol, 3 Gm.; paraffin ointment, white, 97 Gm. Melt the ointment, dissolve the phenol therein, and stir till cold. Proportion of phenol reduced, and glycerin omitted. [*25 p.c. weaker.*

Unguentum Acidi Salicylici.—Formula unaltered. Melt the ointment, sift in the powder, and stir till cold.

Unguentum Aconitinæ.—Formula and process unaltered.

Unguentum Aquæ Rosæ.—Rose water, 20 mils; white beeswax, 18 Gm.; purified borax, 1 Gm.; almond oil, 61 Gm.; oil of rose, 0·1 mil. Melt the wax in the oil and add the borax, previously dissolved in the rose water, stirring continually; then add the oil of rose and stir till cold. Spermaceti is now omitted and beeswax added. [*Modified.*

Unguentum Atropinæ.—Formula and process unaltered.

Unguentum Belladonnæ.—Liquid extract of belladonna, 80 mils; benzoated lard, 60 Gm.; wool fat, 20 Gm. Evaporate the extract on a water-bath till it weighs 20 Gm.; then mix it with the lard and wool fat. Contains 0·6 per cent. of alkaloids. Wool fat now added. [*Modified.*

Unguentum Cantharidini.—Cantharidin, 0·1 Gm.; chloroform, 10 mils; benzoated lard, 290 Gm. Dissolve the cantharidin in the chloroform, add the solution to the previously melted lard, and stir till cold. Contains 0·033 per cent. of cantharidin, and is approximately one-third weaker than Unguentum Cantharidis. [*New.*

Unguentum Cantharidis.—Now replaced by Unguentum Cantharidini.

Unguentum Capsici.—Capsicum fruit, bruised, 25 Gm.; hard paraffin, 10 Gm.; soft paraffin, 75 Gm.; prepared lard, 10 Gm. Digest on a water-bath for one hour, stirring occasionally; then strain and stir till cold. Paraffins and lard now replace spermaceti and olive oil. [*Modified.*

Unguentum Cetacei.—Spermaceti, 20 Gm.; white beeswax, 8 Gm.; liquid paraffin, 72 Gm. Melt together and stir till cold. Liquid paraffin replaces almond oil, and benzoin is omitted. [*Modified.*

Unguentum Chaulmoogræ.—Chaulmoogra oil, 10 Gm.; hard paraffin, 40 Gm.; soft paraffin, white, 50 Gm. Melt the paraffins, add the oil, and stir till cold. [*From I.C.A.*

Unguentum Chrysarobini.—Chrysarobin, in powder, 4 Gm.; soft paraffin, 96 Gm. Mix by trituration. Soft paraffin now replaces benzoated lard. [*Modified.*

Unguentum Cocainæ.—Formula and process unaltered.

Unguentum Conii.—Formula omitted.

Unguentum Creosoti.—Formula and process unaltered.

Unguentum Eucalypti.—Formula and process unaltered.

Unguentum Gallæ.—Formula and process unaltered.

Unguentum Gallæ cum Opio.—Formula and process unaltered.

Unguentum Glycerini Plumbi Subacetatis.—Replaced by Unguentum Plumbi Subacetatis.

Unguentum Hamamelidis.—Liquid extract of hamamelis, 10 mils; wool fat, 60 Gm.; soft paraffin, 30 Gm. Mix by trituration in a warm mortar. Wool fat and soft paraffin replace hydrous wool fat. [*Modified.*

Unguentum Hydrargyri.—Mercury, 30 Gm.; benzoated lard, 65 Gm.; prepared suet, 5 Gm. Process unaltered. Proportion of mercury reduced. [*38 p.c. weaker.*

Unguentum Hydrargyri Ammoniati.—Ammoniated mercury, in powder, 5 Gm.; benzoated lard, 95 Gm. Mix by trituration. Benzoated lard replaces paraffin ointment, and the proportion of ammoniated mercury is now reduced by one-half. [*50 p.c. weaker.*

Unguentum Hydrargyri Compositum.—Formula and process unaltered, but strength reduced as the mercury ointment used is now weaker. [*38 p.c. weaker.*

Unguentum Hydrargyri Iodidi Rubri.—Formula unaltered. Mix by trituration.

Unguentum Hydrargyri Nitratis.—Formula unaltered. Mixture to be at a temperature of about 150° when transferred to heated earthen jar, and, after adding the cold mercurial solution, to be kept at a temperature of not less than 90° till frothing ceases.

Unguentum Hydrargyri Nitratis Dilutum.—Formula unaltered. Mix by trituration.

Unguentum Hydrargyri Oleati.—Oleated mercury, 25 Gm.; benzoated lard, 75 Gm. Mix by trituration. Oleated mercury (Hydrargyrum Oleatum) replaces the old mercuric oleate. [*Modified.*

Unguentum Hydrargyri Oxidi Flavi.—Formula unaltered. Mix by trituration.

Unguentum Hydrargyri Oxidi Rubri.—Formula unaltered. Melt the paraffin ointment, sift in the red mercuric oxide, and stir till cold.

Unguentum Hydrargyri Subchloridi.—Mercurous chloride, 20 Gm.; benzoated lard, 80 Gm. Mix by trituration. Proportion of calomel doubled. [*100 p.c. stronger.*

Unguentum Iodi.—Formula and process unaltered.

Unguentum Iodoformi.—Iodoform, in powder, 10 Gm.; prepared lard, 90 Gm. Mix by trituration. Prepared lard replaces paraffin ointment. [*Modified*

Unguentum Lanæ Compositum.—Prepared lard, 40 Gm.; wool fat, 40 Gm.; paraffin ointment, 20 Gm. Melt together and stir till cold. [*New.*

Unguentum Myrobalani.—Myrobalans, in powder, 20 Gm.; benzoated lard, 80 Gm. Mix. [*From I.C.A.*

Unguentum Myrobalani cum Opio.—Myrobalan ointment, 92·5 Gm.; opium, in powder, 7·5 Gm. Mix. [*From I.C.A.*

Unguentum Paraffini.—Hard paraffin, 27 Gm.; soft paraffin, 70 Gm.; white beeswax, 3 Gm. Melt together, and stir till cold. White beeswax is now added. [*Modified.*

Unguentum Picis Liquidæ.—Tar, 70 Gm.; prepared lard, 5 Gm.; yellow beeswax, 25 Gm. Melt together and stir till cold. Prepared lard is now added. [*Modified.*

Unguentum Plumbi Acetatis.—Formula omitted.

Unguentum Plumbi Carbonatis.—Formula omitted.

Unguentum Plumbi Iodidi.—Lead iodide, in powder, 10 Gm.; benzoated lard, 90 Gm. Mix by trituration. Benzoated lard replaces paraffin ointment. [*Modified.*

Unguentum Plumbi Subacetatis.—Strong solution of lead subacetate, 12·5 Gm.; wool fat, 25 Gm.; hard paraffin, 12·5 Gm.; soft paraffin, 50 Gm. Melt the wool fat and paraffins together, stir till nearly cold, add the solution, and stir till cold. [*New.*

Unguentum Potassii Iodidi.—Formula and process unaltered.

Unguentum Resinæ.—Resin, 26 Gm.; yellow beeswax, 26 Gm.; olive oil, 26 Gm.; prepared lard, 22 Gm. Melt together, strain, and stir till cold. Proportion of prepared lard increased. [*Modified.*

Unguentum Staphisagriæ.—Formula and process unaltered.

Unguentum Sulphuris.—Formula unaltered. Mix by trituration.

Unguentum Sulphuris Iodidi.—Formula omitted.

Unguentum Veratrinæ.—Formula omitted.

Unguentum Zinci.—Formula unaltered. Mix by trituration.

Unguentum Zinci Oleatis.—Zinc sulphate, 30 Gm., is dissolved in 60 mils of distilled water, and the solution mixed with a solution of hard soap, 90 Gm., in 600 mils of distilled water; heat to boiling, allow the zinc oleate to rise to the surface and cool, pour off the liquid, and boil the oleate with successive quantities of distilled water till almost free from sulphates. Finally, reduce the cake of zinc oleate to coarse powder, dry below 60°, melt on a water-bath with an equal weight of soft paraffin, white, and stir till cold. Proportion of hard soap increased. [*Modified.*

Vinum Antimoniale.—Tartarated antimony, 4 Gm.; distilled water, boiling, 40 mils; sherry, to 1,000 mils. Proportion of tartarated antimony reduced. [*12·5 p.c. weaker.*

Vinum Aurantii.—Now contains from 12 to 14 per cent. by volume of ethyl hydroxide. [*about 16 p.c. stronger.*

Vinum Colchici.—Formula and process unaltered.

Vinum Ferri.—Formula and process unaltered, but product contains 0·125 to 0·3 per cent. w/v of iron.

Vinum Ferri Citratis.—Iron and ammonium citrate, 18 Gm.; orange wine, to 1,000 mils. [*Modified.*

Vinum Ipecacuanhæ.—Formula and process unaltered.

Vinum Quininæ.—Formula and process unaltered.

Vinum Xericum.—Strength unaltered, but tests amplified.

Zinci Oleostearas.—Hard soap, 200 Gm.; curd soap, 100 Gm.; zinc sulphate, 100 Gm.; distilled water, q.s. Dissolve the soaps in 1,500 mils of distilled water by the aid of heat, and add the zinc sulphate previously dissolved in 200 mils of distilled water; collect the precipitate, wash till free from sulphates, dry, and reduce to fine powder. [*New.*

METRIC AND IMPERIAL EQUIVALENTS.

BRITISH PHARMACOPŒIA, 1914.

The metrical quantities of the B.P. translated into ordinary weights and measures:—

lb. = the pound avoirdupois. oz. = the ounce avoirdupois (437·5 grs.) ʒi = the drachm—apothecaries' 60 grains.

WEIGHT.

Metric.	Imperial Equivalent.	Metric.	Imperial Equivalent.	
B.P. Grammes.	Grains.	B.P. Grammes.	ʒ Drachms	Grains.
0 002	0·031	4·6	1	11
0·003	0·046	5	1	17
0·015	·23	6	1	33
0·03	·46	6·85	1	46
0·06	·93	7	1	48
0·10	1·55	7·5	1	56
0 15	2·3	8	2	3·5
0 2	3·1	8·6	2	13
0·3	4·6	9	2	18·5
0 5	7·7	9·4	2	25
0 57	8·8	10	2	34·5
0·6	9·3	11	2	50
0 75	11·6	12	3	5
0·8	12·4	12·5	3	13
1	15·4324	14	3	36
1·25	19·3	14·8	3	48 5
2	30·9	15	3	51·5
2·4	37	16	4	7
2·5	38·5	18	4	38
3	46·3	20	5	8·5
4	61·75	21	5	24

B.P. METRIC AND IMPERIAL EQUIVALENTS—*continued.*

Metric.	Imperial Equivalent.	
B.P. Grammes.	ʒ Drachms.	Grains.
22	5	39·5
24	6	10·5
25	6	27
26	6	41
27	6	57
28	7	11

	Av. Ozs.	ʒ Drs.	Grs.
29	1	0	10
30	1	0	25
31	1	0	41
32	1	0	56
33	1	1	12
34	1	1	27
35	1	1	42·5
36·5	1	2	6
37·5	1	2	21
40	1	3	0
41·4	1	3	21·5
42	1	3	31
44	1	4	2
45	1	4	17
50	1	5	34
52	1	6	5
55	1	6	51
58	2	0	20
60	2	0	51
61	2	1	6
62·5	2	1	29·5
65	2	2	8
66	2	2	23½
66·5	2	2	31
70	2	3	25

Metric.	Imperial Equivalent.		
Grammes.	Av. Ozs.	ʒ Drs.	Grs.
72	2	3	56
75	2	4	42
80	2	6	0
82	2	6	30·5
85	2	7	17
87·5	3	0	38
90	3	1	16·5
92·5	3	1	55
95	3	2	34
96	3	2	49
97	3	3	4·5
97·5	3	3	12
98	3	3	20
100	3	3	51
105	3	5	8
112·5	3	7	4
115	4	0	25
120	4	1	42
123	4	2	28
125	4	2	59
137·5	4	6	12
140	4	6	50·5
150	5	2	7
151	5	2	23
152·6	5	2	47
159·5	5	4	34
160	5	4	42
170	5	7	16
175	6	1	16
180	6	2	33
190	6	5	7
200	7	0	24
210	7	2	58
250	8	5	58
260	9	1	15
270	9	3	49
275	9	5	7

B.P. METRIC AND IMPERIAL EQUIVALENTS—*continued.*

Metric.	Imperial Equivalent.			Metric.	Imperial Equivalent.			
B. P. Grammes.	Av. Ozs.	ʒ Drs.	Grs.	B.P. Grammes.	lb.	Av. Oz.	ʒ dr.	Gr.
290	10	1	41	500	1	1	4	39
300	10	4	15	510	1	1	7	13
310	10	6	49	540	1	3	0	21
328	11	4	9	560	1	3	5	30
330	11	4	40	580	1	4	3	21
350	12	2	31	650	1	6	6	46
360	12	5	6	652	1	6	7	17
365	12	6	23	660	1	7	2	3
400	14	0	48	700	1	8	5	3
440	15	3	48	720	1	9	2	54
450	15	6	22	750	1	10	3	20
				760	1	10	5	54
				800	1	12	1	36
				835	1	12	3	18
				840	1	13	4	36
				850	1	13	7	10
				940	2	1	1	9
				1000	2	3	2	0

CAPACITY.

Metric.	Imperial Equivalent.	Metric.	Imperial Equivalent.	
B. P. Millilitres.	Minims.	B.P. Millilitres.	ʒ Fl. Drs.	Minims
0·1	1·7	5	1	24.5
0·2	3·4	10	2	49
0·5	8·5	11·5	3	14·3
1	16·9	12	3	23
1·7	28·7	12·5	3	31·2
2	33·8	15	4	13·4
2·5	42·2	16	4	30·3
3	50·7	20	5	38
		25	7	3

B.P. METRIC AND IMPERIAL EQUIVALENTS—*continued.*

Metric.	Imperial Equivalent.		
B.P. Millilitres.	Fl. Ozs.	ʒ fl. drs.	Min.
30	1	0	27
31	1	0	43·7
35	1	1	51·3
37·5	1	2	33·5
40	1	3	16
45	1	4	40
50	1	6	5
55	1	7	30
60	2	0	54
62·5	2	1	36·5
70	2	3	43
65	2	2	18
75	2	5	7·5
80	2	6	32
100	3	4	10
110	3	6	59
120	4	1	47
125	4	3	12
130	4	4	36
150	5	2	14
160	5	5	3
162·5	5	5	46
170	5	7	52
175	6	1	17
180	6	2	41
200	7	0	19
210	7	3	8
250	8	6	24
280	9	6	51
300	10	4	28
310·5	10	7	26
320	11	2	6
365	13	0	47
375	13	3	36
400	14	0	38
410	14	3	27
440	15	3	54

Metric.	Imperial Equivalent.		
B.P. Millilitres.	Fl. ozs.	ʒ Fl. Drs.	Min.
445	15	5	18
460	16	1	32
500	17	4	49
565	19	7	7

	Pts.	Fl. oz.	ʒ Fl. drs.	min.
600	1	1	0	58
625	1	1	7	59
650	1	2	7	1
700	1	4	5	6
750	1	6	3	11
760	1	6	6	0
875	1	10	6	23
900	1	11	5	25
940	1	13	0	41
950	1	13	3	30
1000	1	15	1	34
1100	1	18	5	44
1500	2	12	6	22
2000	3	10	3	10
2500	4	7	7	56
3000	5	5	4	43
3200	5	12	5	2
4000	7	0	6	17
5000	8	15	7	51
7500	13	3	7	47
10000	17	11	7	42
15000	26	7	7	33

B.P. LEAD & ARSENIC LIMITS.

Limits of the proportion of lead or of arsenic permissibly present as an impurity in the following pharmacopœial substances.

Parts per million.

	Lead.	Arsenic.
Acidum Aceticum	—	2
Acidum Acetylsalicylicum	10	2
Acidum Benzoicum	—	2
Acidum Boricum	25	5
Acidum Citricum	20	1·4
Acidum Hydriodicum Dilutum	10	5
Acidum Hydrobromicum Dilutum	5	5
Acidum Hydrochloricum	10	5
Acidum Lacticum	10	5
Acidum Nitricum	20	5
Acidum Phosphoricum Concentratum	10	5
Acidum Salicylicum	—	2
Acidum Sulphuricum	20	5
Acidum Sulphurosum	10	5
Acidum Tartaricum	20	1·4
Alumen Purificatum	—	5
Ammonium Benzoas	10	2
Ammonium Bromidum	10	5
Ammonium Carbonas	5	2
Ammonium Chloridum	5	5
Antimonium Sulphuratum	—	1000
Bismuthi Carbonas	—	2
Bismuthi Salicylas	—	2
Bismuthi Subnitras	—	2
Borax Purificatus	5	5
Calcii Carbonas Præcipitatus	10	5
Calcii Chloridum	20	5
Calcii Hydras	20	5
Calcii Hypophosphis	10	5
Calcii Lactas	10	5
Calcii Phosphas	—	5
Calx	—	5
Creta Præparata	—	5
Cupri Sulphas	—	10
Ferri Carbonas Saccharatus	—	5
Ferri et Ammonii Citras	—	5
Ferri et Potassii Tartras	—	5
Ferri et Quininæ Citras	—	5
Ferri Phosphas Saccharatus	—	5
Ferri Sulphas	—	2
Ferri Sulphas Exsiccatus	—	5
Ferrum	—	200
Ferrum Redactum	—	200

B.P. LEAD AND ARSENIC LIMITS—*continued.*

	Lead.	Arsenic.
Glucosum	—	2
Glycerinum	—	4
Liquor Ammoniæ Fortis	—	0·5
Liquor Ferri Perchloridi Fortis	—	10
Liquor Ferri Persulphatis	—	5
Liquor Magnesii Bicarbonatis	0·5	0·2
Lithii Carbonas	10	5
Lithii Citras	5	2
Magnesia Levis	20	5
Magnesia Ponderosa	20	5
Magnesii Carbonas Levis	20	5
Magnesii Carbonas Ponderosus	20	5
Magnesii Sulphas	5	5
Potassii Acetas	10	5
Potssii Bicarbonatis	5	5
Potassii Bromidum	10	5
Potassii Carbonas	5	2
Potassii Chloras	10	5
Potassii Citras	10	2
Potassii Iodidum	10	5
Potassii Nitras	10	5
Potassii Nitras	10	5
Potassii Sulphas	20	5
Potassii Tartras	20	2
Potassii Tartras Acidus	20	2
Sodii Benzoas	10	2
Sodii Bicarbonas	5	2
Sodii Bromidum	10	5
Sodii Carbonas	10	2
Sodii Carbonas Exsiccatus	25	5
Sodii Chloridum	10	2
Sodii et Potassii Tartras	20	2
Sodii Hypophosphis	10	5
Sodii Iodidum	10	5
Sodii Nitris	—	5
Sodii Phosphas	5	5
Sodii Phosphas Aicidus	5	2
Sodii Salicylas	10	2
Sodii Sulphas	5	2
Sodii Sulphis	—	5
Strontii Bromidum	20	5
Sulphur Præcipitatum	—	5
Sulphur Sublimatum	—	5
Zinci Acetas	—	5
Zinci Carbonas	—	10
Zinci Chloridum	—	5
Zinci Oxidum	—	10
Zinci Sulphas	—	5

THE ALCOHOLIC MENSTRUA OF THE BRITISH PHARMACOPŒIA.

The table on pages 56 and 57 gives the proportions of 90 per cent. alcohol (58 o.p.), and distilled water (both by measure and by weight) required for the production of one gallon or 1000 mils of the weaker alcoholic menstrua of the British Pharmacopœia. No pretension is made to minute scientific accuracy the quantities being approximate only, but the range of error is well within that of the hydrometers and measuring vessels used in the laboratory. Proof strengths are given to the nearest half degree, avoirdupois weights to the nearest 1/8 ounce, percentages within 0·05, and specific gravities within 0·0005 of the calculated figures. The alcohol has been kept rather above the theoretical quantity to compensate for the slight loss of spirit which usually occurs during the manipulation of alcoholic liquids. Considerable heat is developed on mixing alcohol and water, and when it is remembered that the temperature of the liquid may from this cause be raised by as much as 9° C. (16°·2 F.) the advantage of knowing the exact quantities which will, after contraction has taken place, produce a given volume at 15°·5 C. is very evident. In the second division of the table the proportions for mixing by weight to obtain a product of one gallon, or one litre, are indicated. During hot weather, and especially when dealing with a considerable bulk of liquid, it is found simpler, quicker, and more accurate to weigh the spirit and water instead of reducing to 15°·5 C. and measuring, and the method of mixture by weight, as far as the dilution of alcohol is concerned, has much to recommend it, and deserves to be more generally adopted. The 7 and 1 mixture is used in the preparation of Extractum Belladonnæ Liquidum, and the 1 and 1 mixture for the adjustment of Tinctura Opii. So much depends upon accuracy in the prescribed strength of the alcoholic menstrua employed for certain pharmaceutical preparations, that in order to guard against error (especially when the method of mixture by volume has been adopted) it is often advisable to check the specific gravity of a diluted alcohol before use. But before a true reading can be taken, the liquid must either be brought to the standard temperature of 15°·5 C.,

SPECIFIC GRAVITY TABLE.

Apparent specific gravities of the various official alcohols at temperatures from 2° to 25° C. (35°·6 to 77° F.).

Degrees C.	90 per cent.	70 per cent.	60 per cent.	45 per cent.	20 per cent.	Degrees F.
2	0·8454	0·9010	0·9242	0·9529	0·9795	35·6
3	0·8446	0·9002	0·9234	0·9522	0·9793	37·4
4	0·8438	0·8994	0·9226	0·9515	0·9790	39·2
5	0·8429	0·8986	0·9218	0·9508	0·9787	41
6	0·8421	0·8977	0·9210	0·9502	0·9785	42·8
7	0·8412	0·8969	0·9203	0·9495	0·9782	44·6
8	0·8404	0·8961	0·9195	0·9488	0·9780	46·4
9	0·8395	0·8953	0·9187	0·9481	0·9777	48·2
10	0·8387	0·8946	0·9179	0·9474	0·9774	50
11	0·8378	0·8936	0·9171	0·9468	0·9772	51·8
12	0·8370	0·8928	0·9164	0·9461	0·9769	53·6
13	0·8361	0·8920	0·9156	0·9454	0·9767	55·4
14	0·8352	0·8912	0·9148	0·9447	0·9764	57·2
15	0·8342	0·8904	0·9140	0·9440	0·9761	59
15·5	**0·8337**	**0·8899**	**0·9134**	**0·9435**	**0·9760**	**60**
16	0·8333	0·8895	0·9132	0·9433	0·9759	60·8
17	0·8326	0·8887	0·9124	0·9426	0·9756	62·6
18	0·8318	0·8879	0·9116	0·9419	0·9754	64·4
19	0·8310	0·8871	0·9108	0·9412	0·9751	66·2
20	0·8301	0·8863	0·9100	0·9405	0·9748	68
21	0·8293	0·8854	0·9093	0·9399	0·9746	69·8
22	0·8284	0·8846	0·9086	0·9392	0·9743	71·6
23	0·8276	0·8838	0·9078	0·9385	0·9741	73·4
24	0·8268	0·8830	0·9070	0·9378	0·9738	75·2
25	0·8259	0·8822	0·9062	0·9371	0·9735	77

NOTE.—The figure in the fourth decimal place is not intended to be scientifically accurate, but merely serves to qualify the one preceding it.

or a correction made by observing the temperature and apparent specific gravity at the time of the experiment, and ascertaining the real specific gravity at 15°·5 C. by reference to the small table given above which embraces the extremes of temperature likely to be met with in this climate.

ALCOHOL CONV

By F. C.

Menstrua, B.P., 1914. Per cent. by volume.	Per cent. absolute Alcohol by weight.	Proportions for Mixing. BY VOLUME. From Alcohol (90 per cent.).	
		Alcohol, 90 p.c. at 15°·5 C.	Distilled Water at 15°·5 C.
Alcohol, 90 p.c.	85·68		
Alcohol, 79·65 p.c. ... ... {Alcohol, 90 p.c., 7 vol. Distilled Water, 1 vol.} ...	73·12	141⅞ fl. oz. 884·6 mils.	20⅛ fl. oz. 127·1 mils.
Alcohol, 70 p.c.	62·50	124⅝ fl. oz. 777·7 mils.	38⅝ fl. oz. 241·6 mils.
Alcohol, 60 p.c.	52·15	106¾ fl. oz. 666·6 mils.	57¼ fl. oz. 357·8 mils.
Alcohol, 46·2 p.c. ... ... {Alcohol, 90 p.c., 1 vol. Distilled Water, 1 vol.} ...	38·95	82¼ fl. oz. 513·7 mils.	82⅛ fl. oz. 513·3 mils.
Alcohol, 45 p.c.	37·85	80⅛ fl. oz. 500 mils.	84¼ fl. oz. 526 6 mils.
Alcohol, 20 p.c.	16·30	35⅝ fl oz. 222·2 mils.	126½ fl. oz. 791 mils.

ERSION TABLE.

J. BIRD.

Proportions for Mixing. **BY WEIGHT.**		Product, Specific Gravity, and Proof Strength at 15°·5 C.			Weight of one Gallon of Product.
From Alcohol (90 per cent.).					
Alcohol 90 p.c.	Distilled Water.	Product.	Specific Gravity.	Proof degrees.	
			0 837	58 o.p.	8lb. 5½oz
7lb. 6⅛oz. 737·8 Gm.	1lb. 4⅜oz. 127·1 Gm.	1 gallon 1000 mils.	0·8645	40 o.p.	8lb. 10½oz.
6lb. 7⅞oz. 648·5 Gm.	2lb. 6⅝oz. 241·6 Gm.	1 gallon 1000 mils.	0·8899	22·5 o.p.	8lb. 14½oz.
5lb. 9oz. 555·9 Gm.	3lb. 9¼oz. 357·8 Gm.	1 gallon 1000 mils.	0·9134	5·5 o.p.	9lb. 2¼oz.
4lb. 4⅝oz. 428·3 Gm.	5lb. 2⅛oz. 513·3 Gm.	1 gallon 1000 mils.	0·9415	19 u.p.	9lb. 6¾oz.
4lb. 2⅞oz 417·2 Gm.	5lb. 4¼oz. 526·6 Gm.	1 gallon 1000 mils	0·9435	21 u.p.	9lb. 7oz.
1lb. 13¾oz. 185·2 Gm.	7lb 14½oz. 791 Gm.	1 gallon 1000 mils.	0·976	65 u.p.	9lb. 12¼oz.

USEFUL EQUIVALENTS—WEIGHTS & MEASURES.

1 minim = 0·91 gr. measure.
1 ounce = 437·5 grains.
1 (troy) oz. = 480 grains.
1 pound = 7,000 grains.
1 gal. (water) = 70,000 grs. (10 lb.)
1 cubic foot = 6¼ gal. (6·232 exactly)

WEIGHT.

Metric.		English.	English.		Metric.
1 gramme	=	15·432 grains	1 grain	=	0·0648 gramme
1 kilo (1000 grm)	=	2lb. 3oz. and 120 grains.	1 ounce	=	28·349 grammes
			1 pound	=	453·59 ,,
			1 cwt.	=	50·8 kilos.

CAPACITY.

1 C.c. (The volume of 1 gram. of water at 60° F. (15·5° C.)	=	16·9 minims or 15·432 grn. measures.	1 fl. drachm	=	3·552 C.c. (nearly)
1 litre	=	35¼ fl. oz. & 11 min. (or 1·76 pt. nearly)	1 fl. ounce	=	28·42 C.c.
1 mil The volume of 1 gram. of water at 39·2° F. (4° C.)	=	$\frac{1}{1000}$ litre.	1 pint	=	568·336C.c.
			1 gallon	=	4·545 litres (nearly)

LENGTH.

1 metre	=	39·37 in.	1 inch	=	25·4 millimetres
1 centimetre	=	0·393 ,,	1 foot	=	30·48 centimetres
1 kilometre	=	0·62 mile.	1 yard	=	0·9144 metre
			1 mile	=	1·6 kilometre.

Area of a circle = 3⅐ times (3·1416) the radius squared.

Circumference of a circle = 3⅐ times (3·1416) the diameter.

Contents in gallons of a cylindrical drum = 6¼ times area of base (circle) in square feet multiplied by height in feet.

Contents in gallons of rectangular cistern = 6¼ times the length, breadth and height (all in feet) multiplied together.

DOSES.

Teaspoonful = about 1 fl. drm.
Dessertspoonful = about 2 fl. drms.
Tablespoonful = about ½ fl. oz.
Wineglassful = about 2 fl. oz.

Scale of Doses.—Taking the adult dose as one, the proportion for children of various ages would be—12 years, ½; 4 years, ¼; two years, ⅛; and one, $\frac{1}{16}$.

THERMOMETRIC CONVERSION.

FAHRENHEIT TO CENTIGRADE.

Subtract 32, multiply remainder by 5, and divide by 9.

CENTIGRADE TO FAHRENHEIT.

Multiply by 9, divide by 5, and add 32.

22° F. (10° frost) = 5·6° C. 32° F. (freezing point) = 0° C. 60° F. = 15·7° C. 180° F. = 82·2° C. 212° F. (boiling point) = 100° C. 220° F. = 104·4° C.

BOILING POINT OF SALINE SOLUTIONS.

Saturated solution of common salt = 224° F.

FREEZING POINT OF SOLUTIONS.

Calcium Chloride, 10% solution freezes at 20° F.; 20% at 0° F. **Glycerine**, 20% by volume, freezes at 22° F.; 25% at 16° F. **Alcohol** (methylated), 20% freezes at 20° F.; 25% at 12° F.

FREEZING MIXTURES.

Ammon. nitrate 1, water 1, reduces 50° F. to 4° F. Sodium sulphate crystals, in coarse powder 8, hydrochloric acid 5, from 50° F. to 0° F. Snow or ice 2, common salt 1, from 56° F. to 5° F.

PROOF SPIRIT.

Has sp. gr. ·920, contains 57 per cent. of alcohol by volume. To obtain equivalent in proof spirit, for "over proof" add 100 to "degrees over proof." For "under proof" spirit subtract "degrees under proof" from 100; *e.g.*, 58 o.p. spirit, 100 gallons equals (100 + 58), *i.e.*, 158 gallons proof spirit, and 100 gallons of 40 under proof spirit equals (100 − 40), *i.e.*, 60 gallons proof spirit.

SPECIFIC GRAVITY.

Twaddell: To convert degrees Twaddell into specific gravity—multiply by 5 and add 1,000. Ex., 66° Twaddell = 66 × 5 + 1,000 = 1·330.

SIMPLE SYRUP.

Contains ⅔ its weight of sugar, and 10 volumes contain 8·87 parts by weight of sugar. 8 parts by weight of sugar measure approximately 5 volumes when in solution.

TEMPERATURE OF STEAM.

Pressure shown on gauge—15 lbs. to the sq. inch, temperature = 250° F.; 30 lbs. = 275° F.; 45 lbs. = 293° F; 60 lbs. = 307° F.

Foreign Price Equivalents.

1d. per oz. = 3·71 francs or 3·01 marks per kilo or ·32 dollar per lb. (English). 1s. per lb. = 2·78 francs or 2·25 marks per kilo or ·24 dollar per lb.

Foreign Money.

French and Belgian, 1 franc = 10d., 25 francs 20 centimes = £1.
German, 8 pfennigs = 1d., 1 mark 2 pfennigs = 1s.
American, 1 cent = ½d., 1 dollar = 4s. 2d.
Russian, 4 copecks = 1d., 1 rouble = 2s. 1½d.
Indian, 1 anna = 1d., 1 rupee = 1s. 4d., 15 rupees = £1.

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